BEFORE THE PUBLIC UTILITIES COMMISSION OF OHIO

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In The Matter Of The Application Of Ohio Edison Company, The Cleveland Electric Illuminating Company, and The Toledo Edison Company For Authority To Provide For A Standard Service Offer Pursuant To R.C. 4928.143, In The Form Of An Electric Security Plan

Case No. 14-1297-EL-SSO

DIRECT TESTIMONY OF MATTHEW I. KAHAL

On Behalf of the The Office of the Ohio Consumers' Counsel 10 West Broad Street, Suite 1800 Columbus, Ohio 43215-3485

and

The Northeast Ohio Public Energy Council 31320 Solon Road Cleveland, Ohio 44139

DECEMBER 22, 2014

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1	I.	QUALIFICATIONS
2		
3	<i>Q1</i> .	PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.
4	<i>A1</i> .	My name is Matthew I. Kahal. I am employed as an independent consultant
5		retained by the Office of the Ohio Consumers' Counsel ("OCC") and the
6		Northeast Ohio Public Energy Council ("NOPEC") to address certain issues in
7		this docket. My business address is 1108 Pheasant Crossing, Charlottesville, VA
8		22901.
9		
10	<i>Q2</i> .	PLEASE STATE YOUR EDUCATIONAL BACKGROUND.
11	<i>A2</i> .	I hold B.A. and M.A. degrees in economics from the University of Maryland and
12		have completed course work and examination requirements for the Ph.D. degree
13		in economics. My areas of academic concentration included industrial
14		organization, economic development, and econometrics.
15		
16	<i>Q3</i> .	WHAT IS YOUR PROFESSIONAL BACKGROUND?
17	<i>A3</i> .	I have been employed in the area of energy, utility, and telecommunications
18		consulting for the past 35 years, working on a wide range of topics. Most of my
19		work during my consulting career has focused on electric utility integrated
20		planning, power plant licensing, environmental compliance issues, mergers, and
21		utility financial issues. I was a co-founder of Exeter Associates, Inc. ("Exeter"),
22		and from 1981 to 2001, and I was employed at Exeter as a Senior Economist and

1		Principal. During that time, I took the lead role at Exeter in performing cost of
2		capital and financial studies. In recent years, the focus of much of my
3		professional work has expanded to include electric utility markets, power supply
4		procurement, and industry restructuring.
5		
6		Prior to entering consulting, I served on the Economics Department faculties at
7		the University of Maryland (College Park) and Montgomery College, teaching
8		courses on economic principles, development economics, and business. A
9		complete description of my professional background is provided in Appendix A.
10		
11	<i>Q4</i> .	HAVE YOU PREVIOUSLY TESTIFIED AS AN EXPERT WITNESS
11 12	<i>Q4</i> .	HAVE YOU PREVIOUSLY TESTIFIED AS AN EXPERT WITNESS BEFORE UTILITY REGULATORY COMMISSIONS?
11 12 13	Q4. A4.	HAVE YOU PREVIOUSLY TESTIFIED AS AN EXPERT WITNESSBEFORE UTILITY REGULATORY COMMISSIONS?Yes. I have testified before approximately two dozen state and federal utility
11 12 13 14	Q4. A4.	HAVE YOU PREVIOUSLY TESTIFIED AS AN EXPERT WITNESS BEFORE UTILITY REGULATORY COMMISSIONS? Yes. I have testified before approximately two dozen state and federal utility commissions, federal courts, and the U.S. Congress in more than 400 separate
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 11 12 13 14 15 16 17 	Q4. A4.	HAVE YOU PREVIOUSLY TESTIFIED AS AN EXPERT WITNESS BEFORE UTILITY REGULATORY COMMISSIONS? Yes. I have testified before approximately two dozen state and federal utility commissions, federal courts, and the U.S. Congress in more than 400 separate regulatory cases. My testimony has addressed a variety of subjects including fair rate of return, resource planning, financial assessments, load forecasting, competitive restructuring, rate design, purchased power contracts, environmental
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 11 12 13 14 15 16 17 18 19 	Q4. A4.	HAVE YOU PREVIOUSLY TESTIFIED AS AN EXPERT WITNESS BEFORE UTILITY REGULATORY COMMISSIONS? Yes. I have testified before approximately two dozen state and federal utility commissions, federal courts, and the U.S. Congress in more than 400 separate regulatory cases. My testimony has addressed a variety of subjects including fair rate of return, resource planning, financial assessments, load forecasting, competitive restructuring, rate design, purchased power contracts, environmental compliance, merger economics, and other regulatory policy issues. These cases have involved electric, gas, water, and telephone utilities. A list of these cases is

Q5. WHAT PROFESSIONAL ACTIVITIES HAVE YOU ENGAGED IN SINCE LEAVING EXETER AS A PRINCIPAL IN 2001?

A5. Since 2001, I have worked on a variety of consulting assignments pertaining to 3 4 electric restructuring, purchase power contracts, environmental controls, cost of capital, and other regulatory issues. Current and recent clients include the U.S. 5 Department of Justice, U.S. Air Force, U.S. Department of Energy, the Federal 6 Energy Regulatory Commission, Connecticut Attorney General, Pennsylvania 7 Office of Consumer Advocate, the Ohio Consumers' Counsel, New Jersey 8 9 Division of Rate Counsel, Rhode Island Division of Public Utilities, Louisiana 10 Public Service Commission, Arkansas Public Service Commission, the Maryland Public Service Commission, the Maine Public Advocate, the New Hampshire 11 Consumer Advocate, the Maryland Department of Natural Resources, the 12 Maryland Energy Administration, and certain private clients. 13 14 15 Q6. HAVE YOU PREVIOUSLY TESTIFIED ON THE SUBJECTS OF ELECTRIC RESTRUCTURING, TRANSITION TO COMPETITION, AND 16

17 **RETAIL DEFAULT SERVICE?**

A6. Yes. I have testified on these topics on numerous occasions during the past 10 to
 15 years. This includes the design of programs to provide generation supply
 service for those retail electric customers requiring default service. Earlier this
 year, I testified in the pending Electric Security Plan ("ESP") cases involving

		Direct Testimony of Matthew I. Kahal On Behalf of the Office of the Ohio Consumers' Counsel and The Northeast Ohio Public Energy Council PUCO Case No. 14-1297-EL-SSO
1		AEP Ohio (Case No. 13-2385-EL-SSO) and Duke Energy Ohio (Case No. 14-
2		841-EL-SSO). Please see Appendix C for a listing of such cases.
3		
4	II.	OVERVIEW AND SUMMARY
5		
6		A. <u>Purpose of Testimony</u>
7		
8	Q7.	WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY?
9	A7.	I have been asked by OCC and NOPEC to address certain issues pertaining to the
10		filing in this case by three FirstEnergy Corporation utilities, Ohio Edison
11		Company, The Cleveland Electric Illuminating Company and The Toledo Edison
12		Company (the "FE Utilities" or "the Utilities"). The FirstEnergy Corporation
13		("FE") parent is a very large, diversified corporation with extensive utility
14		operations in Ohio and other Northeast states and substantial non-utility (mostly
15		merchant generation) operations. The Utilities' Application refers to this filing as
16		ESP IV, because this is the fourth such ESP filing. The Utilities' current ESP
17		results from a stipulation approved by the Public Utilities Commission of Ohio
18		("PUCO" or "the Commission") on July 18, 2012. ¹ The proposed ESP IV would

¹ Case No. 12-1230-EL-SSO, In the Matter of Ohio Edison Company, The Cleveland Electric Illuminating Company and The Toledo Edison Company for Authority to Provide for a Standard Service Offer Pursuant to Section 4928.143, Revised Code in the Form of an Electric Security Plan, July 18, 2012, Order and Opinion, ("ESP III").

1	cover the time period June 1, 2016 through May 31, 2019, i.e., three years
2	following the end of ESP III.
3	
4	The principal purpose of my testimony is to evaluate the Utilities' proposed ESP
5	versus the results under a Market Rate Offer ("MRO"). The Utilities claim that
6	the ESP will provide greater ratepayer benefits than the MRO alternative in the
7	long-term on both quantitative and qualitative grounds.
8	
9	The Utilities' filing includes a study quantifying the benefits to the Ohio economy
10	of two FirstEnergy Solutions' ("FES") merchant power plants. The output of
11	these two plants will be acquired through long-term wholesale purchase power
12	agreements ("PPAs") between the Utilities and FES. My testimony evaluates the
13	merits of that study and its relevance to this case.
14	
15	Ohio statutes require that electric distribution utilities ("EDUs") provide a
16	generation standard service offer ("SSO"), either through an ESP or MRO, for
17	customers that do not take generation service from competitive retail electric
18	suppliers. The FE Utilities propose in this case to meet their SSO obligation
19	through the use of an ESP.
20	
21	Approval of an ESP by the PUCO requires that the utility demonstrate that its
22	proposed ESP is more favorable, in the aggregate, for its customers, than the

1		MRO alternative. This has been referred to as the "ESP versus MRO statutory
2		test," and how that test has been evaluated has been the subject of considerable
3		dispute in previous ESP cases. The full wording of this test is stated in R.C.
4		4928.143(C)(1), and this is what I am referencing as "the test."
5		
6		Since the test is a comprehensive analysis of the proposed ESP in the aggregate, I
7		incorporate the findings and recommendations from other OCC witnesses that
8		have a bearing on the merits of ESP IV.
9		
10	<i>Q8</i> .	WHAT STANDARDS OR CRITERIA HAS THE PUCO USED IN THE PAST
11		IN APPLYING THE STATUTORY TEST?
12	<i>A8</i> .	The PUCO in past cases has considered three categories of costs and benefits in
13		its application of the statutory test for the ESP versus the MRO:
14		
15		• The SSO generation prices for customers;
16		• Other quantifiable customer impacts; and
17		• Qualitative attributes of the proposed ESP. ²
18		
19		The ESP benefits included in the test must be those "incremental" for the
20		proposed ESP. Benefits resulting from a previous ESP or from some other source
21		(e.g., a previous rate case settlement) should not be included in the test.

² See e.g., Case No. 12-1230-EL-SSO, Order and Opinion, at pages 55-57.

1	Q9.	WHAT FINDINGS DID THE UTILITIES REACH CONCERNING THE ESP
2		VERSUS MRO TEST?
3	A9.	The Utilities present the statutory test for the proposed ESP IV in the testimony of
4		witness Fanelli. He acknowledges that under the Utilities' proposed Competitive
5		Bidding Process ("CBP"), the ESP IV and an MRO would be expected to produce
6		the same SSO generation pricing.
7		
8		However, his testimony asserts that non-CBP provisions of ESP IV—principally
9		from the proposed Retail Rate Stability Rider ("Rider RRS")-will produce
10		estimated savings of \$2.021 billion, or \$773 million on a net present value
11		("NPV") basis. ³ Mr. Fanelli's quantification is unusual in that it covers a 15-year
12		study period rather than the three-year period of the ESP that is typically used in
13		the application of the test. Had he restricted himself to the ESP IV's June 1, 2016
14		to May 31, 2019 time period, he instead would have calculated a very large net
15		ratepayer loss, i.e., in excess of \$400 million. Finally, Mr. Fanelli asserts that
16		there are qualitative benefits associated with the proposed ESP IV. ⁴

³ Direct Testimony of Santino L. Fanelli ("Fanelli Testimony"), at 8 (Aug. 4, 2014). Please note that these are witness Fanelli's updated and corrected figures through his 11/14/14 Errata Sheet.

⁴ Fanelli Testimony, at 8-10.

1	<i>Q10</i> .	WHAT CONCLUSIONS HAVE YOU REACHED CONCERNING THE
2		STATUTORY TEST?
3	<i>A10</i> .	I conclude that the as-filed ESP IV does not provide customers with quantified
4		benefits and cost savings as compared with the alternative of an MRO. As a
5		result the PUCO should modify the ESP filing to reduce its cost to customers
6		commensurate with the cost of a market rate offer. Alternatively, the PUCO
7		could direct the utility to pursue a market rate offer.
8		
9		While the ESP IV customer cost impacts are uncertain and difficult to quantify, a
10		reasonable estimate is that ESP IV will, on balance, increase the costs to the
11		Utilities' customers by about \$500 to \$600 million over the June 1, 2016 to May
12		31, 2019 ESP IV time period and by about \$3.0 billion over the proposed 15-year
13		life of the Rider RRS. ⁵ I also conclude that the claimed "qualitative benefits" of
14		ESP IV, in general, are unpersuasive, highly speculative, or are otherwise
15		obtainable without the disadvantages and higher costs of the Utilities' onerous
16		ESP IV proposals. ⁶

⁵ The \$3 billion cost detriment relied on OCC/NOPEC witness Wilson's medium scenario Rider RRS result. See page 12 of his direct testimony.

⁶ I have been advised by counsel that the question of whether qualitative provisions should be considered by the PUCO in applying the statutory ESP versus MRO test is currently pending before the Ohio Supreme Court. See, *In the Matter of Northeast Ohio Public Energy Council*, Appeal No. 2013 – 5013.

1	<i>Q11</i> .	DOES YOUR EVALUATION OF THE STATUTORY TEST RELY ON THE
2		TESTIMONY OF OTHER WITNESSES?
3	<i>A11</i> .	Yes, it does. Two of the most important issues in this case include the Utilities'
4		proposal to continue their use of the Delivery Capital Recovery Rider ("Rider
5		DCR"). This would include implementing revenue increases of up to \$30 million
6		in each year of ESP IV. Another charge, Rider RRS, has the potential to impose
7		hundreds of millions of dollars of added (i.e., above market) costs on customers
8		over the proposed 15-year term. In addition, the Utilities propose the Government
9		Directives Recovery Rider ("Rider GDR").
10		
11		The Rider DCR continuation proposal and the introduction of Rider GDR are
12		addressed in detail by OCC witness Effron, and the Rider RRS proposal is
13		addressed by OCC/NOPEC witness Wilson. OCC witness Woolridge presents a
14		cost of capital study addressing the Utilities' proposed return component for Rider
15		RRS. My evaluation of the ESP versus MRO statutory test directly or indirectly
16		incorporates and relies upon the findings of these witnesses.
17		
18	<i>Q12</i> .	WHAT ARE YOUR CONCLUSIONS CONCERNING THE UTILITIES'
19		ECONOMIC IMPACT STUDY?
20	A12.	The Utilities' have sponsored an economic impact study, prepared by an outside
21		consultant, purporting to show the "economic impacts" associated with two FES
22		unregulated power plants (the Sammis coal-fired plant and the Davis-Besse

1		nuclear plant) on the local and Ohio economy. ⁷ The study finds that when
2		economic linkages and "multiplier" effects are modeled, the two plants contribute
3		on the order of 3,000 jobs and \$1 billion of annual output to the Ohio economy.
4		Moreover, Utilities' witness Fanelli uses these impact estimates as a qualitative
5		(but not a quantitative) argument in favor of Rider RRS and ESP IV.
6		
7		But the study is not about the focus in this proceeding on the Utilities' rates to be
8		charged to two million Utility customers. And the study is not about making
9		electric generation markets function for Ohioans without subsidies to Utility
10		affiliates like FES. It is certainly not a persuasive argument in favor of the Rider
11		RRS. Nor does it negate the finding that the Utilities' proposed ESP IV fails to
12		pass the statutory test.
13		
14	<i>Q13</i> .	WHAT ARE YOUR SPECIFIC OBJECTIONS?
15	A13.	The economic impact study only has meaning if one assumes that FES, the plants'
16		owner, will soon retire either or both of the two plants, i.e., a decision that the
17		PUCO (or some other Ohio policymaking body) could influence, for example,
18		through Rider RRS or some other subsidy arrangement. Otherwise, the study
19		serves no purpose in this case. Similar hypothetical studies could be prepared for

⁷ *See*, Direct Testimony of Sarah Murley ("Murley Testimony"), at Attachment SM-1 and Attachment SM-2 (Aug. 4, 2014).

1	every other power plant, industrial, commercial, or governmental facility in Ohio,
2	and such studies similarly would have no value in this proceeding.
3	
4	A problem with the FE Utilities' proposal is that there is no factual evidence from
5	them (other than veiled suggestion) in this case regarding such retirements. The
6	FE Utilities have not asserted that they will close these power plants. To the
7	contrary, all evidence and analyses presented in this case by the FE Utilities leads
8	to the conclusion that FES does not expect to retire either plant during the next 15
9	years, even absent Rider RRS. Absent a decision to retire the plants at issue, there
10	would be no economic impact and the "status quo" of normal operation at the two
11	power plants simply continues.
12	
13	There is, of course, another possibility that should be concerning for customers.
14	This other possibility is that the FE Utilities are simply wrong in their assessment
15	of future PJM market prices, and that FES will subsequently discover that one or
16	both plants are simply not "economically viable." This possibility could
17	materialize with or without the proposed Rider RRS. In such a situation, the
18	proposed Rider RRS would impose an enormous cost penalty on Ohio customers
19	of the FE Utilities if uneconomic operations continue. If Rider RRS is approved,
20	as filed, this negative outlook has two possible consequences depending on the
21	Utilities' and FES's prudence. One outcome assumes the Utilities and FES (i.e.,
22	the parties to the wholesale PPAs that underlie Rider RRS) conclude that one or

1	both plants are no longer economically viable (i.e., ongoing operating costs would
2	exceed PJM market revenue over the plants' remaining life). In such a scenario,
3	the plant(s) is (are) retired. This is the same "economic impact" as if Rider RRS
4	had never been approved. In other words, Rider RRS would have no effect-
5	positive or negative—on the retirement decision and the local economy. In this
6	instance, the Companies' customers would be responsible for all costs incurred in
7	addition to costs to shut down and retire the plant with little or no benefit to said
8	customers.
9	
10	In the second scenario of low PJM prices, the Utilities and FES continue to
11	operate the plants, even though the plants have been determined to be uneconomic
12	relative to the PJM competitive wholesale market. Jobs at the plants would be
13	maintained, profiting FES, but at a cost—perhaps a very high cost—to the
14	Utilities' customers. What Utilities' witness Murley's study overlooks is that
15	imposing substantial cost penalties on utility customers in order to subsidize
16	uneconomic power plants (and to profit FES) imposes income and job losses on
17	the Utilities' service areas and the Ohio economy. Inefficient subsidies to
18	uneconomic energy or industrial facilities is not an accepted or efficient economic
19	development strategy. Essentially, in Rider RRS the FE Utilities are proposing to
20	impose a cost penalty on their two million customers. I do not recommend their
21	approach.

1		I describe this impact in detail later in my testimony, and comment on the details
2		of witness Murley's studies of the Sammis and Davis-Besse power plants.
3		
4		In summary, the FE Utilities and FES cannot have it both ways. Either they
5		conclude that the power plants are economically viable-and therefore will not be
6		retired irrespective of the Rider RRS—or they do not. In the negative case, the
7		plants may be retired irrespective of the presence of Rider RRS. Or, the Utilities
8		and FES imprudently may choose under Rider RRS to continue to operate
9		uneconomic plants to extract from customers the profits allowed under the PPAs
10		and impose a cost penalty on customers that will have a negative regional
11		economic impact.
12		
13	<i>Q14</i> .	SHOULD THE PUCO APPROVE THE UTILITIES' ESP PROPOSAL IN
14		THIS CASE?
15	A14.	No. The concept of the ESP has outlived any purpose it may have served for
16		customer protection (if it did protect customers) under Senate Bill 221. It
17		operates now as circumventions of both the market pricing intended in 1999 under
18		Senate Bill 3 and the regulation of monopoly distribution service under Revised
19		Code Chapter 4909. And, to provide the benefits of competitive pricing to
20		consumers, an ESP is not needed. Under Ohio law, the standard service offer
21		based upon a wholesale auction can be accomplished through the MRO. In this

1	regard, former PUCO Chairman Snitchler wrote earlier this year to propose
2	eliminating the electric security plan as soon as 2015:
3	
4	The fundamental, structural changes that have occurred since 2011,
5	including resolving generation ownership and corporate separation
6	of all investor owned utilities, eliminates the need for the ESP or
7	MRO filing For these reasons, the requirement that such filings
8	be made should be eliminated from the statute starting in 2015 or
9	at the time 100% of the Standard Service Offer (SSO) load is
10	secured at wholesale auction. ⁸
11	
12	R.C. 4928.143(C) (1) allows the PUCO to modify an ESP. ⁹ Modifications to the
13	utility's plan should include restructuring the ESP so that the SSO is provided
14	through an MRO instead.

⁸ In the Matter of the Commission's Investigation of Ohio's Retail Electric Service Market, PUCO Case 12-3151-EL-COI, Concurring Opinion at 3 (March 26, 2014).

⁹ The burden of proof in the proceeding shall be on the electric distribution utility. The commission shall issue an order under this division for an initial application under this section not later than one hundred fifty days after the application's filing date and, for any subsequent application by the utility under this section, not later than two hundred seventy-five days after the application's filing date. Subject to division (D) of this section, the commission by order shall approve or modify and approve an application filed under division (A) of this section if it finds that the electric security plan so approved, including its pricing and all other terms and conditions, including any deferrals and any future recovery of deferrals, is more favorable in the aggregate as compared to the expected results that would otherwise apply under section 4928.142 of the Revised Code. Additionally, if the commission so approves an application that contains a surcharge under division (B)(2)(b) or (c) of this section, the commission shall ensure that the benefits derived for any purpose for which the surcharge is established are reserved and made available to those that bear the surcharge. Otherwise, the commission by order shall disapprove the application.

1		Under an MRO, much of the added costs that customers are being asked to pay,
2		including the PPA charge and the distribution rider charges, would be eliminated.
3		This would save customers money and is consistent with the fact that the Utility is
4		offering standard service through a CBP, as envisioned under a market rate
5		offering.
6		
7		B. <u>Testimony Outline</u>
8		
9	Q15.	HOW IS THE REMAINDER OF YOUR TESTIMONY ORGANIZED?
10	A15.	Section III presents my evaluation of the ESP versus MRO test, focusing mostly
11		on the three most important components of ESP IV, the DCR, GDR, and RRS
12		riders. This section also briefly discusses other aspects of ESP IV that might be
13		considered qualitative factors. In Section IV, I discuss the "economic impact"
14		studies pertaining to the Sammis and Davis-Besse power plants and the lack of
15		relevance to this case.

1	III.	ESP VERSUS MRO TEST
2 3		A. <u>The Statutory Test</u>
4		
5	Q16.	WHAT IS YOUR UNDERSTANDING OF THE STATUTORY
6		REQUIREMENT FOR PUCO APPROVAL OF AN ESP?
7	<i>A16</i> .	As acknowledged by the FE Utilities in the Application, EDUs may satisfy the
8		requirement to provide a standard service offer either through an ESP or MRO. ¹⁰
9		The requirements for an MRO include a Competitive Bidding Process ("CBP")
10		that adheres to certain standards, procedures, and criteria specified in Ohio
11		Revised Code, Section 4928.142. The requirements and potential features of an
12		ESP are specified in Ohio Revised Code, Section 4928.143. R.C. 4928.143
13		addresses the establishment of SSO generation rates and a number of other
14		aspects of electric service, including "distribution infrastructure and
15		modernization," which are not part of the MRO provision of the Code.
16		The ESP statute also provides the test for PUCO approval of an ESP – if the
17		utility proposes an ESP, the PUCO:
18		
19		shall approve or modify and approve an application filed under
20		division (A) of this section if it finds that the electric security plan
21		so approved, including its pricing and all other terms and

¹⁰ R.C. 4928.141(A).

1		conditions, including any deferrals and any future recovery of
2		deferrals, is more favorable in the aggregate as compared to the
3		expected results that would otherwise apply under section
4		4928.142 of the Revised Code. (Ohio Revised Code, Section
5		4928.143 (C)(1).)
6		
7		The statute further states that the utility has the burden of proof under this
8		provision.
9		
10		B. <u>The Utilities' Application of the Test</u>
11		
12	Q17.	PLEASE DESCRIBE THE UTILITIES' APPLICATION OF THE TEST.
13	A17.	FE Utilities witness Fanelli employs the three-part test used by the Commission in
14		past cases. He begins by considering the expected effect on SSO generation rates
15		and concludes that ESP IV and an MRO would be the same. He states at page 7:
16		
17		Since the Companies would also use a competitive process to
18		procure generation service for all SSO customers under an MRO,
19		there is no quantifiable difference related to the resulting SSO
20		pricing between the proposed ESP and an MRO.

1	Next, he considers the second part-other quantitative cost impacts. Citing to the
2	Commission's decision in the ESP III case, Mr. Fanelli states that Rider DCR will
3	have no net effect on customer rates. ¹¹ This is because the Rider DCR rate
4	increases (expected to be \$30 million per year) would essentially be the same as
5	under an MRO where costs of additional distribution investment would be
6	collected from customers in base rate cases. He then identifies two features of
7	ESP IV that he claims reduce costs. The first is a \$3 million (over three years)
8	shareholder contribution to economic development. ¹² The second is FE Utilities'
9	witness Ruberto's estimated costs savings from Rider RRS: \$2,018 million (or
10	\$770 million net present value). ¹³ The total is an alleged net benefit of $$2,021$
11	million. It must be noted that the Rider RRS alleged cost savings cover 15 years
12	(2016-2031), which is the proposed life of that rider, rather than the three-year
13	ESP period normally used by the PUCO in past cases.
14	
15	The third part of Mr. Fanelli's application of the test concerns qualitative
16	considerations. Most of his discussion (and, indeed, the FE Utilities' filing)
17	focuses on claimed public interest benefits of Rider RRS. To a lesser extent, he
18	mentions Riders DCR and GDR as promoting infrastructure investment "more
19	efficiently" than base rate cases, but he does not document or explain the alleged

¹¹ Fanelli Testimony, at 7.

¹² Id., at 7.

¹³ Id., at 8.

1		"efficiencies." ¹⁴ He also briefly discusses benefits from "continuing funding" for
2		low income customers and certain technical enhancements to the Supplier Tariffs
3		that he states could contribute to an improved retail market. ¹⁵
4		
5	Q18.	DO YOU DISPUTE MR. FANELLI'S FINDING CONCERNING THE SSO
6		GENERATION RATES?
7	A18.	No, I do not. There is every reason to believe that the Utilities would use the
8		same CBP under an MRO alternative as is proposed for ESP IV. Hence, I agree
9		with Mr. Fanelli that for purposes of the test, the SSO rate impact should be
10		assumed to be identical under the ESP and the MRO.
11		
12	Q19.	DO YOU ACCEPT MR. FANELLI'S CONTENTION REGARDING
13		ECONOMIC DEVELOPMENT FUNDING?
14	A19.	Yes. While it is not entirely clear how the funds will ultimately be used or what
15		customer (or public interest) benefits it will provide, I accept the Utilities'
16		representation that the entire \$3 million will come from shareholders. Thus, it is
17		reasonable to include it in the quantitative test.

¹⁴ Id., at 9.

¹⁵ Id., at 8-9.

1	<i>Q20</i> .	WHAT IS YOUR POSITION CONCERNING THE ALLEGED \$2.018
2		BILLION CUSTOMER BENEFIT FROM RIDER RRS?
3	A20.	At the outset, it must be noted that the claimed \$2.018 billion cost savings covers
4		the 15-year (2016-2031) life of Rider RRS and the underlying wholesale PPAs.
5		This is a very unusual application of the test. In my opinion, this is inappropriate.
6		For the ESP IV three-year term, witness Ruberto estimates a customer loss of
7		\$419 million, because his analysis indicates that net benefits do not begin to
8		emerge until sometime beginning in 2019. Hence, in conducting the test, Mr.
9		Fanelli should have included a customer cost of \$419 million, not a benefit of
10		\$2.018 billion.
11		
12		The larger issue is whether the \$2.018 billion net benefit is realistic. As
13		OCC/NOPEC witness Wilson observes, FE Utilities' witness Rose's estimates of
14		wholesale energy prices (gas and electricity) are speculative and unlikely. ¹⁶ FE
15		Utilities' witness Ruberto's study relies on the very aggressive escalation over the
16		15 years of gas and wholesale electric prices sponsored by FE Utilities' witness
17		Rose. In addition, his study optimistically assumes very favorable operation of
18		the Sammis and Davis-Besse plants during this 15-year period. As OCC/NOPEC
19		witness Wilson demonstrates, merely making reasonable modifications to the
20		assumed natural gas (and therefore wholesale electricity) prices results in the
21		\$2.018 billion benefit becoming a large customer loss.

¹⁶ OCC/NOPEC Witness Wilson testimony, at 34 (Dec. 22, 2014).

1	<i>Q21</i> .	HOW DOES MR. FANELLI JUSTIFY USING THE 15-YEAR TIME PERIOD
2		FOR THE ESP VERSUS MRO TEST?
3	<i>A21</i> .	While this was not done for ESP III, Mr. Fanelli observes that the PUCO did
4		recognize ESP benefits beyond the ESP term in its earlier ESP II order.
5		Specifically, he is referring to the Utilities' willingness to absorb rather than
6		charge customers for certain transmission charges that would be incurred after the
7		end of ESP II.
8		
9		This "precedent," however, is simply not on point and should not be used for
10		Rider RRS. This is because the benefit associated with foregone transmission
11		charges was well-defined and understood. It was not a highly speculative benefit.
12		By comparison, the claimed post-2019 savings associated with Rider RRS are
13		speculative and highly uncertain at best. Moreover, OCC/NOPEC witness Wilson
14		demonstrates that, if anything, Rider RRS is likely to result in a net loss after
15		2019. It is not merely a matter of whether \$2.018 billion is an accurate figure, but
16		at issue is whether it is even a positive figure.
17		
18		By comparison, estimates during the next three years are subject to less
19		uncertainty as observed prices from energy futures markets and the PJM capacity
20		market can provide useful guidance. The Utilities and the OCC are in closer
21		agreement regarding Rider RRS for that time period. Hence, I recommend
22		avoiding undue speculation and using only the ESP IV term in conducting the

1		test. That said, my testimony presents the test using both the ESP IV term and the
2		full 15 years.
3		
4	<i>Q22</i> .	WHAT WOULD THE QUANTITATIVE RESULT HAVE BEEN IF MR.
5		FANELLI HAD USED THE THREE-YEAR ESP IV TERM FOR RIDER
6		RRS?
7	A22.	As OCC/NOPEC witness Wilson states, Mr. Ruberto calculates a net loss of \$420
8		million for Rider RRS for the ESP IV term ¹⁷ . Subtracting the \$3 million
9		economic development contribution produces an ESP IV that is more costly for
10		customers than an MRO by \$417 million. That is, the proposed ESP IV produces
11		a net ratepayer cost of \$417 million based on the Utilities own analysis.
12		
13	<i>Q23</i> .	WHAT QUALITATIVE BENEFITS DOES MR. FANELLI CLAIM FOR
14		RIDER RRS?
15	A23.	Relying on the testimony of other FE Utilities witnesses, he makes the following
16		benefits claims for Rider RRS that are qualitative:

¹⁷ OCC/NOPEC witness Wilson at 9.

1	•	The Rider will help preserve employment and income
2		directly and indirectly associated with the two power plants
3		(i.e., about 3,000 jobs).
4		
5	•	The two power plants contribute power supply benefits in
6		the form of reliability and fuel diversity.
7		
8	•	Retirements of the two plants could result in the necessity
9		to build new transmission.
10		
11	•	Rider RRS will benefit customers, over and above any net
12		savings, by providing rate stability. ¹⁸
13		
14	As noted above	ve, Mr. Fanelli also makes assertions of qualitative benefits for
15	Riders DCR a	nd GDR along with the low income proposal and retail market
16	enhancements	But these qualitative claims are vague and poorly described in his
17	testimony.	

¹⁸ Fanelli Testimony, at 9.

1		C. <u>Response to Mr. Fanelli</u>
2		
3	<i>Q24</i> .	HAVE YOU CONDUCTED A QUANTIFICATION OF THE TEST?
4	A24.	Yes I have, for the ESP IV term. I begin by accepting Mr. Fanelli's position that
5		the net benefit for SSO pricing is zero and the economic development funding has
6		a value of \$3 million. I disagree with Mr. Fanelli that there is no expected
7		quantitative impact from Rider DCR. I believe that a net cost to customers from
8		Rider DCR of \$90 to \$180 million is a plausible three-year estimate of the cost
9		penalty. Finally, I incorporate the Utilities' own Rider RRS estimate of a net cost
10		of \$419 million. These parameters produce the following range:
11		
12		Low: $(3) + 90 + 419 = 506$ million
13		High: $(3) + 180 + 419 = 596$ million
14		
15		The FE Utilities' proposed plan has a cost penalty to customers on the order of
16		\$500 to \$600 million during the three-year term of ESP IV from June 1, 2016 to
17		May 31, 2019.

1	<i>Q25</i> .	DOES THIS QUANTIFICATION CHANGE IF YOU INCORPORATE THE
2		FULL 15-YEAR TERM THAT THE FE UTILITIES PROPOSED FOR
3		RIDER RRS?
4	A25.	Yes, but as noted earlier, I strongly recommend against using a 15-year test due to
5		its highly uncertain nature. And I am not testifying that exceeding the term of the
6		proposed ESP for purposes of the test is even legal. Notably, OCC witness
7		Wilson recognizes the importance of uncertainty by preparing Rider RRS
8		projections based on three scenarios of gas and electric prices. He produces a
9		nominal, 15-year cost savings of \$0.2 billion (\$0.0 billion NPV) for the most
10		favorable scenario, a medium scenario estimate of a \$3.0 billion net cost (\$1.5
11		billion NPV), and a scenario with a \$3.9 billion net cost to customers (\$2.3 billion
12		NPV). Hence, on an NPV basis, his results range from essentially break-even for
13		customers to a \$2.3 billion net cost to customers ¹⁹ .
14		
15		For purposes of the 15-year ESP test, I utilize Mr. Wilson's medium case of a
16		\$3.0 billion net cost to customers. I then incorporate the economic development
17		benefit (\$3 million) and the potential costs of Rider DCR (\$90 to \$180 million).
18		The result is that the FE Utilities' ESP proposal has an overall 15-year impact of a
19		net cost to customers of about \$3.1 billion to \$3.2 billion. The Commission
20		should protect Ohio customers from this result and reject the FE Utilities'
21		proposal for an electric security plan.

¹⁹ OCC/NOPEC witness Wilson at 12.

1	<i>Q26</i> .	WHAT WOULD THE 15-YEAR TEST PRODUCE IF YOU GAVE EQUAL
2		WEIGHT TO THE DIFFERING PROJECTIONS OF BOTH MR. WILSON
3		AND UTILITIES WITNESS ROSE?
4	A26.	Giving equal weight to the \$2.0 billion benefit using Mr. Rose's projections and
5		the \$3.0 billion net cost from Mr. Wilson's medium scenario produces a net
6		ratepayer cost over 15 years of about \$450 million. That cost to customers plus
7		recognizing the \$3 million economic development benefit and the \$90 to \$180
8		million potential cost for Rider DCR produces a range of about \$0.5 billion to
9		\$0.6 billion as a detriment to customers, under the ESP versus MRO test. Had I
10		instead used the NPV values for the Rider RRS projected impacts, the results
11		would be similar in magnitude, nearly a half billion dollar net cost as the
12		detriment to customers.
13		
14		To reemphasize, I strongly recommend against the use of this 15-year time
15		horizon for the test as it is excessively speculative.
16		
17	Q27.	IS THERE MERIT TO THE VARIOUS QUALITATIVE ARGUMENTS SET
18		FORTH BY THE UTILITIES TO SUPPORT RIDER RRS?
19	A27.	No. While I am not recommending that the Commission consider qualitative
20		factors under the MRO versus ESP test, the Utilities' qualitative arguments are
21		unpersuasive. The first argument is that Rider RRS will somehow preserve jobs
22		at the power plants (and other jobs directly or indirectly related). There is no clear

1		explanation as to how or why this will occur. Presumably, it occurs because
2		absent Rider RRS, the two power plants would be retired. But this supposition is
3		flatly contradicted by Mr. Ruberto, who shows that under continuation of
4		merchant operations by FES the two plants will be highly profitable. I discuss
5		this issue in more depth in Section IV of my Direct Testimony.
6		
7		Other qualitative factors—rate stability and transmission expansion, are discussed
8		by OCC/NOPEC witnesses Wilson and Sioshansi. The discussion need not be
9		repeated here. OCC/NOPEC witness Wilson shows that customers have other
10		means of achieving rate stability, and there is no assurance that Rider RRS would
11		even make a positive contribution to more stable rates.
12		
13		It should be noted that the Utilities asserted transmission cost savings argument is
14		only relevant if one is willing to assume a retirement scenario, contrary to the
15		implications of Mr. Ruberto's analysis.
16		
17	Q28.	DO YOU HAVE ANY REPLY TO THE UTILITIES' ARGUMENT
18		REGARDING RELIABILITY AND FUEL DIVERSITY?
19	A28.	Yes. Rider RRS operates by having the Utilities enter into long-term cost of
20		service PPAs with FES for the output of Sammis, Davis-Besse, and FE's 4.85
21		percent share of OVEC. This amounts to more than 3,000 MW of baseload
22		capacity. The output is to be sold into the PJM markets for energy, capacity, and

1	ancillary services, with the market revenues offsetting (more or less) the cost of
2	service PPA charges. In other words, Rider RRS and the underlying PPAs are a
3	purely financial arrangement. There is essentially no physical change at all in the
4	manner in which the plants operate (as compared to the status quo of merchant
5	plant operation). Rider RRS does not change anything physically, including
6	power supply reliability and fuel diversity.
7	
8	The only exception would be if Rider RRS affects the retirement decision for
9	those plants, which is totally contrary to Mr. Ruberto's study and the FE Utilities'
10	case. I discuss this further in Section IV of my Direct Testimony.
11	
12	It is important to remember that with or without Rider RRS, customers will obtain
13	all of their physical power supply from the PJM wholesale market, a market that
14	has on the order of 200,000 MW of capacity resources. Rider RRS does not in
15	any way change that, nor does it "earmark" the reliability and fuel diversity of
16	those two power plants for the FE Utilities' customers. ²⁰ Customers ultimately
17	obtain fuel diversity and reliability from that very broad regional power supply
18	market. While Sammis and Davis-Besse are very large plants, together they are a
19	very small percentage of PJM. In addition, reliability and fuel diversity are not

²⁰ At set forth in OCC/NOPEC witness Dr. Sioshansi's testimony, a 960 MW gas fueled generation plant is scheduled/queued to go into service in 2017 in proximity to Davis–Besse. A 1,152 MW gas fueled generation plant is scheduled/queued to go into service in 2020 in the proximity of Sammis.

1		the responsibility of individual generators; that responsibility falls on PJM and the
2		North American Electric Reliability Corporation ("NERC").
3		
4	Q29.	ARE THERE OTHER QUALITATIVE ARGUMENTS AGAINST RIDER
5		RRS?
6	A29.	Yes. The FE Utilities' proposed mechanism is contrary to Ohio's policy choice of
7		opting for a market-based power supply system. In addition, Rider RRS is
8		troubling aside from its very high cost, because the PUCO will have very limited
9		regulatory oversight regarding an arrangement that purports to be "cost of
10		service" pricing. Customers must pay cost of service rates for resources that are
11		not in the retail rate base. This can lead to a problem of cost control incentives
12		and the possibility of abuse by the affiliate to the detriment of utility customers.
13		In particular, under a cost of service PPA FES has little incentive to aggressively
14		control costs, and can increase its profits by increasing investments in the power
15		plants. The FE Utilities, as the buyers under the PPAs, would have little incentive
16		to vigilantly review the reasonableness of the FES costs at those power plants.

17

18 Q30. YOU STATE THAT RIDER DCR HAS A COST TO CUSTOMERS OF \$90 TO 19 \$180 MILLION. WHAT IS THE BASIS FOR THAT COST?

A30. There are very serious problems with Rider DCR, as explained by OCC witness
 Effron. Some of these problems are the well-known generic issues of single-issue
 ratemaking, as he explains. More specifically in this case, Mr. Effron uses the

19	<i>Q31</i> .	WHAT IS THE BASIS OF YOUR \$90 MILLION LOWER BOUND COST?
18		
17		earnings.
16		simply not needed during the ESP IV term for the Utilities to achieve adequate
15		Effron's analysis strongly suggests that the \$180 million of rider revenue is
14		million as an upper bound cost of the Rider DCR for purposes of the test. Mr.
13		or all of the requested \$180 million is in fact needed. I therefore have used \$180
12		would use an updated test year), they bring into question whether a large portion
11		revenue. While Mr. Effron's calculations are not equivalent to a rate case (which
10		to \$30 million, which potentially would equate to \$180 million of additional total
9		The Utilities in this case seek authority for Rider DCR annual rate increases of up
8		
7		million.
6		quantifies excess annual revenue for the three Utilities that total about \$135
5		17.1 percent compared to the authorized 10.5 percent. His Schedule DJE-1
4		authorized 8.48 percent, and returns on equity for the three Utilities of 15.1 to
3		on distribution rate base that year of 10.7 to 11.7 percent as compared with the
2		excess earnings for the Utilities' distribution service. His analysis finds returns
1		latest available actual data (for late 2013) and finds strong evidence of large-scale

A31. It is my understanding that the Utilities intend to use for Rider DCR the currently
 authorized rate of return of 8.48 percent and return on equity of 10.5 percent in a
 2007 rate case. As documented by OCC witness Dr. Woolridge, the utility cost of

1	capital has declined sharply since 2007, as have state commission return on equity
2	awards. He estimates a cost of capital at this time of 6.41 percent, including a
3	return on equity of 8.7 percent. Rider DCR is a proposed mechanism that enables
4	the Utilities' to avoid having their authorized rate of return scrutinized, such as
5	the scrutiny in a base rate case, and to avoid their rate of return from being
6	lowered by the PUCO. That avoidance of scrutiny of the Utilities is detrimental
7	for customers, who pay for the rate of return. This reduction would very likely
8	occur, although I cannot know how much the reduction would be.
9	
10	Mr. Effron estimates that as of late 2013, the three Utilities' distribution rate bases
11	total to \$3.1 billion. (See Schedule DJE-1.) If one assumes that in a base rate
12	case the authorized rate of return is lowered by a mere 0.6 percent (i.e., from 8.48
13	to about 7.90 percent), after income tax gross up, this would reduce the annual
14	revenue requirement by about \$31 million. As compared to Rider DCR, which
15	avoids an update to the authorized rate of return, the base rate case alternative
16	under the MRO would produce a three-year savings of about \$90 million. This
17	lower bound is the savings just from a rate of return update alone and does not
18	consider the excess earnings demonstrated on Mr. Effron's Schedule DJE-1.
19	Rider DCR clearly produces net annual rate increases that are far too large for
20	customers to pay.

1 Q32. DO YOU HAVE THE SAME CRITICISM OF RIDER GDR?

A32. Conceptually, the criticisms are the same as for Rider DCR—it is single-issue
 ratemaking at a time when the evidence shows substantial excess earnings by the
 FE Utilities. The difference is that no rate increase has as yet been identified
 under this rider.

6

Not only is this proposed rider objectionable as single-issue ratemaking (for all of 7 the reasons set forth by Mr. Effron), but the Utilities compound this problem by 8 making it asymmetric. Under this rider, the Utilities have no obligation to file for 9 10 rate reductions resulting from changes in governmental regulations. Moreover, I would be concerned even if this inequity was corrected and the rider is made 11 symmetric. This is because the Utilities have far more information about their 12 13 operations than the PUCO, its Staff or other parties in the process. It would be difficult for the PUCO to ensure that the Utilities are fully compliant with their 14 15 obligation to flow through cost reductions to customers. For this reason, I believe that Rider GDR is fatally flawed. Making the rider symmetric would be an 16 17 improvement, but it is not a cure for customers. This is a highly negative 18 qualitative attribute of ESP IV for customers.

1	<i>Q33</i> .	MR. FANELLI SETS FORTH SEVERAL OTHER QUALITATIVE
2		ARGUMENTS IN SUPPORT OF ESP IV. ARE THESE ARGUMENTS
3		PERSUASIVE?
4	<i>A33</i> .	In general, no. He mentions the "efficiency" of Rider DCR and Rider GDR but
5		does not explain or describe why they are more efficient than base rate cases. He
6		may be referring to the administrative resource requirements of base rate cases,
7		but this pales in comparison with the benefits customers would obtain from
8		avoiding the large and unnecessary rate increases (up to \$180 million for Rider
9		DCR alone). Rate cases would facilitate needed infrastructure investment while
10		ensuring reasonable rates. Rider DCR and GDR will not do that.
11		
12		Mr. Fanelli references the Utilities' \$5 million funding for low income customers,
13		but there is no suggestion that shareholders in any way will fund that expenditure.
14		My testimony takes no position on the specific elements of these two programs.
15		But if all utility customers must pay the cost of the programs, then the Utilities'
16		case for considering this an ESP IV benefit is diminished. In any event, the
17		Utilities could propose this program and the proposed Supplier Tariff-related
18		enhancements under an MRO in another PUCO proceeding (e.g., a base rate case)
19		for the PUCO to adopt elsewhere. There is no need to limit Commission
20		consideration of low-income assistance programs to this case where the FE
21		Utilities are offering such programs as part of an attempt to secure huge financial

1		gains (profits) for themselves or their affiliate, at the expense of all their two
2		million customers.
3		
4		For purposes of the statutory MRO versus ESP test in this case, the qualitative
5		benefitswhatever the qualitative benefits might be for the low income program
6		and Supplier Tariff enhancementsseem very small as compared to the
7		documented and qualified ESP IV ratepayer costs of at least \$0.5 billion and the
8		harm to the competitive markets. These cost increases are unnecessary and are
9		merely intended to increase the Utilities' and FES profits.
10		
11	IV.	ECONOMIC IMPACTS AND PLANT RETIREMENTS
11 12	IV.	ECONOMIC IMPACTS AND PLANT RETIREMENTS
11 12 13	IV. <i>Q34</i> .	ECONOMIC IMPACTS AND PLANT RETIREMENTS PLEASE DESCRIBE THE STUDY SPONSORED BY THE UTILITIES
11 12 13 14	IV. <i>Q34</i> .	ECONOMIC IMPACTS AND PLANT RETIREMENTS PLEASE DESCRIBE THE STUDY SPONSORED BY THE UTILITIES CONCERNING POWER PLANT ECONOMIC IMPACTS.
11 12 13 14 15	IV. <i>Q34</i> . <i>A34</i> .	ECONOMIC IMPACTS AND PLANT RETIREMENTS PLEASE DESCRIBE THE STUDY SPONSORED BY THE UTILITIES CONCERNING POWER PLANT ECONOMIC IMPACTS. The Utilities have sponsored a study by their outside consultant, Sarah Murley
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 11 12 13 14 15 16 17 18 19 	IV. <i>Q34</i> . <i>A34</i> .	ECONOMIC IMPACTS AND PLANT RETIREMENTS PLEASE DESCRIBE THE STUDY SPONSORED BY THE UTILITIES CONCERNING POWER PLANT ECONOMIC IMPACTS. The Utilities have sponsored a study by their outside consultant, Sarah Murley that estimates the regional economic impact of the Sammis and Davis-Besse plants. The study relies upon plant level data (i.e., employment, contractor payments, value of plant output, etc.) supplied by FES along with "multipliers" derived from IMPLAN, a widely-used regional economic impact model. For the
1		annual personal income of \$67 million. ²¹ The study also measures impacts on tax
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2		payments. The Davis-Besse Ohio-wide impacts are similar in magnitude—1,062
3		jobs, output of \$473 million annually, and personal income of \$113 million
4		annually. ²² On a combined basis, witness Murley concludes that the economic
5		impact totals nearly 3,000 jobs and output of roughly \$1 billion annually. She
6		states, "The effects on local communities would be devastating if these Plants
7		close." ²³
8		
	025	
9	Q35.	HOW DOES THE STUDY PERIAIN TO THE PROPOSED ESP IV?
9 10	Q35. A35.	The relevance of the study seems to be explained by the Utilities' policy witness,
9 10 11	Q35. A35.	The relevance of the study seems to be explained by the Utilities' policy witness, Mr. Moul. He states that, "The economic viability of the Plants is in doubt." ²⁴
9 10 11 12	Q35. A35.	The relevance of the study seems to be explained by the Utilities' policy witness, Mr. Moul. He states that, "The economic viability of the Plants is in doubt." ²⁴ He goes on to state that current market revenues may be insufficient to support
 9 10 11 12 13 	Q35. A35.	The relevance of the study seems to be explained by the Utilities' policy witness, Mr. Moul. He states that, "The economic viability of the Plants is in doubt." ²⁴ He goes on to state that current market revenues may be insufficient to support continued operation. While he concedes that the Utilities' witness Rose's market
 9 10 11 12 13 14 	Q35. A35.	The relevance of the study seems to be explained by the Utilities' policy witness, Mr. Moul. He states that, "The economic viability of the Plants is in doubt." ²⁴ He goes on to state that current market revenues may be insufficient to support continued operation. While he concedes that the Utilities' witness Rose's market curve price projections (after near-term losses) certainly would be adequate, "the
 9 10 11 12 13 14 15 	Q35. A35.	 HOW DOES THE STUDY PERTAIN TO THE PROPOSED ESPTY? The relevance of the study seems to be explained by the Utilities' policy witness, Mr. Moul. He states that, "The economic viability of the Plants is in doubt."²⁴ He goes on to state that current market revenues may be insufficient to support continued operation. While he concedes that the Utilities' witness Rose's market curve price projections (after near-term losses) certainly would be adequate, "the Plants may not survive to see these better days."²⁵
 9 10 11 12 13 14 15 16 	Q35. A35.	How DOES THE STUDY PERTAIN TO THE PROPOSED ESPTV? The relevance of the study seems to be explained by the Utilities' policy witness, Mr. Moul. He states that, "The economic viability of the Plants is in doubt." ²⁴ He goes on to state that current market revenues may be insufficient to support continued operation. While he concedes that the Utilities' witness Rose's market curve price projections (after near-term losses) certainly would be adequate, "the Plants may not survive to see these better days." ²⁵

18

power plant costs plus an 11.15 percent return on equity investment, is required

²⁴ Direct Testimony of Donald Moul ("Moul Testimony"), at 2 (Aug. 4, 2014).

²⁵ Id.

²¹ Murley Testimony, at 6, Attachment SM-1.

²² Id. at 8, Attachment SM-2.

²³ Id., at 10.

1		(or at least is needed) to ensure long-term continued operations. As discussed in
2		Section III of my Direct Testimony, Mr. Fanelli uses the modeled economic
3		impacts as a qualitative argument in support of Rider RRS and ESP IV.
4		
5	Q36.	WHAT IS YOUR UNDERSTANDING OF THE CONCEPT OF "ECONOMIC
6		VIABILITY" FOR THE POWER PLANTS?
7	A36.	In order to understand Mr. Moul's concern and the modeled economic impacts, it
8		is first necessary to understand what economic viability means for an existing
9		power plant. This is a very different concept than for a proposed new power
10		plant. For an existing power plant to be economically viable (i.e., avoid
11		retirement), the market revenue stream earned by the plant must be sufficient to
12		cover operating expenses plus the costs of the capital additions that would be
13		required going forward. Capital costs already incurred (legacy capital
14		investments) are irrelevant to the retirement decision and need not be covered by
15		market revenue, in whole or in part, for the plant to continue in operation.
16		
17		A simple example would be helpful to illustrate the concept. Please assume that
18		utility projections are for operating costs for the plant at four cents per kWh,
19		capital additions at an "all-in" cost of 1 cent per kWh, and a market revenue
20		stream of six cents per kWh. The plant's "to go" costs total five cents per kWh,
21		which is more than covered by projected market revenue. Thus, the plant is
22		viable and would not be retired, even if six cents per kWh is too low to provide a

1		reasonable return on (legacy) investment plus depreciation. In this example, the
2		plant owner may be receiving a zero or close to zero return on equity, but the
3		plant still would not be retired. However, if the long-term outlook was for a
4		revenue stream less than five cents per kWh, then the plant could not cover its "to
5		go" costs and might therefore be retired.
6		
7		The main points from this simplified example are: (a) plants must be able to cover
8		"to go" costs with revenue to survive; and (b) the return (if any) of and on legacy
9		investment is irrelevant to the retirement decision.
10		
11	Q37.	HOW DO THESE CONCEPTS RELATE TO MR. MOUL'S CONCERN?
12	A37.	Mr. Ruberto's study is presumably based on the Utilities' estimates of 2016-2031
12 13	A37.	Mr. Ruberto's study is presumably based on the Utilities' estimates of 2016-2031 plant operating costs and capital additions. One must also assume that the market
12 13 14	A37.	Mr. Ruberto's study is presumably based on the Utilities' estimates of 2016-2031 plant operating costs and capital additions. One must also assume that the market price curves sponsored by Mr. Rose reflect the Utilities' outlook. This
12 13 14 15	A37.	Mr. Ruberto's study is presumably based on the Utilities' estimates of 2016-2031 plant operating costs and capital additions. One must also assume that the market price curves sponsored by Mr. Rose reflect the Utilities' outlook. This combination of inputs results in Sammis and Davis-Besse earning market revenue
12 13 14 15 16	A37.	Mr. Ruberto's study is presumably based on the Utilities' estimates of 2016-2031 plant operating costs and capital additions. One must also assume that the market price curves sponsored by Mr. Rose reflect the Utilities' outlook. This combination of inputs results in Sammis and Davis-Besse earning market revenue as merchant plants that fully covers all operating costs, provides FES with an
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1		economically viable. Moreover, this still would be true at market price curves
2		much lower than those of Utilities witness Rose. His projections provide both a
3		very healthy return of and on legacy capital, <i>plus</i> an additional surplus of \$2
4		billion. ²⁶
5		
6		In summary, there is no evidence in the Utilities' case suggesting that retirement
7		is a reasonable expectation. Moreover, as the Utilities' witnesses have noted,
8		Sammis completed an investment in 2010 for environmental controls at a cost of
9		\$1.8 billion, while Davis-Besse in 2014 completed a steam generator replacement
10		at a cost of several hundred million dollars. FE Utilities are presently seeking to
11		extend, until 2037, the Davis-Besse Nuclear Regulatory Commission operating
12		license that expires in 2017. ²⁷ It seems unlikely that FES would undertake such
13		large investments if it expected to soon retire the plants.
14		
15	Q38.	BASED UPON THE UTILITIES' WITNESS ROSE'S MARKET PRICE
16		CURVES AND ASSUMED PLANT OPERATING COSTS, THE FE
17		UTILITIES WOULD NOT RETIRE THE PLANTS. WHAT WOULD
18		HAPPEN IF WHOLESALE MARKET PRICES TURN OUT TO BE LOWER?
19	A38.	OCC/NOPEC witness Wilson's testimony presents scenarios with significantly
20		lower market prices, and it is possible such prices could influence the retirement

²⁶ Direct Testimony of Jay A. Ruberto, at 6 (Aug. 4, 2014).

²⁷ Direct Testimony of Paul A. Harden , at 3, 4, and 10 (Aug. 4, 2014).

1		decision. The Utilities have not presented any evidence on the economic viability
2		at lower wholesale prices. Prices must be substantially lower (not just slightly
3		lower) than witness Rose's projections to warrant retirement.
4		
5	Q39.	IF WHOLESALE MARKET PRICES TURN OUT TO BE MUCH LOWER
6		THAN MR. ROSE'S PROJECTIONS, WOULD RIDER RRS BE NEEDED TO
7		ENSURE CONTINUED PLANT OPERATIONS?
8	A39.	As noted above, if the revenue stream from Mr. Rose's price curves, or even
9		substantially lower, were to occur (i.e., more than \$2 billion lower), then Rider
10		RRS is simply not needed to prevent retirement. Market revenues would be
11		sufficient. It is possible, however, that if future wholesale prices turn out to be
12		substantially lower, the plants could not survive as merchant plants.
13		
14		In the case of Rider RRS coupled with very low market prices, the Utilities and
15		FES could choose to continue plant operation (per the cost of service terms of the
16		PPAs) through 2031. In such a scenario, the plants could survive, but ratepayers
17		would be forced to incur massive losses (i.e., up to \$3.9 billion identified by OCC
18		witness Wilson). While customers would be paying dearly under that scenario,
19		the Utilities' affiliate (FES) would still earn substantial customer-subsidized
20		profits under the PPAs.

1	<i>Q40</i> .	WOULD THE SCENARIO OF MULTI-BILLION DOLLAR RATEPAYER
2		LOSSES YOU JUST DESCRIBED BE A REASONABLE OUTCOME?
3	A40.	No. Such a scenario would reflect imprudent conduct by the Utilities and FES.
4		Whether either Sammis or Davis-Besse is retired at some future time should be
5		based on an economic viability test (i.e., a revenue stream sufficient to cover "to
6		go" costs). That test should be the same with or without Rider RRS. In other
7		words, the future economics of the plants in the market may dictate their closures
8		regardless of whether Rider RRS is approved. In that event and if the Rider RRS
9		is approved, the vast sums of money paid by customers to the FE Utilities will
10		have been all the more pointless for the Ohioans who paid it-but not pointless
11		for the recipient that profited from the money, FirstEnergy. If Rider RRS is in
12		place, the Utilities and FES should terminate the PPAs if PJM revenues cannot
13		cover plant operating costs (plus future capital additions). If the Utilities and FES
14		behave prudently, then Rider RRS has no bearing—positive or negative—on the
15		retirement decision. Hence, witness Murley's "retirement impact study" has no
16		relevance.

17

18 Q41. ISN'T IT POSSIBLE THAT THE UTILITIES AND FES, UNDER RIDER 19 RRS AND LOW PJM PRICES, MAY DECIDE TO KEEP THE POWER 20 PLANTS OPERATING?



1		uneconomic power plants in order to continue to collect from the Utilities'
2		customers its lucrative 11.15 percent return on equity. In fact, the more it invests
3		in the plants, the more it profits. This scenario preserves jobs at the power plants,
4		but at an enormous cost to customers and the local economy.
5		
6	Q42.	THIS LAST SCENARIO IS A COMBINATION OF LOW PJM PRICES,
7		RIDER RRS, AND FES' WILLINGNESS TO OPERATE UNECONOMIC
8		PLANTS THROUGH 2031. IN THAT SCENARIO, IS MS. MURLEY'S
9		STUDY VALID?
10	A42.	No, her study under that scenario is neither correct nor complete. This is because
11		the study ignores the fact that retail electric rate increases have a significant
12		detrimental impact on the service area economies of the three FE Utilities. This is
13		particularly true when the cause of the rate increase is due to operating expensive
14		power plants that are not economically viable.
15		
16	<i>Q43</i> .	PLEASE EXPLAIN THIS NEGATIVE ECONOMIC IMPACT.
17	A43.	Large electric rate increases can adversely affect the local economy through
18		several mechanisms. For example, consider OCC/NOPEC witness Wilson's
19		Rider RRS estimated cost penalty, which could be as high as \$3.9 billion for
20		customers. Residential customers in that case would experience a higher cost of
21		living and therefore less disposable income after paying their electric bills to
22		spend on locally supplied (and Ohio-wide) goods and services. This reduced

1	spending adversely impacts local employment and incomes. For residential
2	customers, the Rider RRS cost penalty is analogous to experiencing a tax
3	increase—albeit one with no corresponding benefit in the form of more public
4	services.
5	
6	Commercial customers (e.g., local retail establishments) likely will respond to the
7	Rider RRS cost penalty by raising their prices to cover the added cost of doing
8	business. This effect further reduces the net disposable income of households in
9	the FE Utilities' service area, further reducing employment through multiplier
10	impacts. Alternatively, local business owners could choose to absorb some or all
11	of the Rider RRS cost penalty, but doing so would only serve to reduce their own
12	disposable income and spending. Either way, the local economy takes a hit.
13	Manufacturing customers of the FE Utilities have an additional problem. The
14	Rider RRS cost penalty adversely affects their cost structure and competitiveness.
15	As a general matter, these establishments must compete with other manufacturers
16	in the region, the U.S., and even globally in some cases. The cost penalty only
17	serves to impair their competitiveness, thereby reducing local employment. In
18	addition, the higher long-term electric rates reduce the incentive for new
19	businesses (which must pay Rider RRS) to locate in the FE Utilities' service
20	areas.

1		Witness Murley's study gives no consideration to the far reaching adverse
2		impacts of Rider RRS that could occur if FES and the FE Utilities insisted on
3		continued operations for uneconomic plants.
4		
5	<i>Q44</i> .	CAN YOU SUMMARIZE THE THREE SCENARIOS PERTAINING TO
6		RIDER RRS AND ECONOMIC VIABILITY?
7	A44.	Yes. In Scenario No. 1, future PJM prices (overall) remain high enough to
8		support continued operations through 2031 for both plants. This would be the
9		case if Utilities' witness Rose's market curves are correct, but it also might be
10		true even if PJM prices turn out to be somewhat lower than his projections. After
11		all, his projections produce an 11.15 percent return on legacy investment plus a \$2
12		billion revenue surplus over and above that return. In Scenario No. 1, Rider RRS
13		has no effect on the plants' retirement decisions as compared with continued
14		merchant operation.
15		
16		In Scenario No. 2, the future PJM price path is much lower than Mr. Rose's
17		projections, so low that the plants cannot cover operating costs (and future capital
18		additions). The economic decision would be to retire one or both plants. But this
19		is the correct economic decision regardless of the presence or absence of Rider
20		RRS. After all, under traditional regulation, utilities have a prudence obligation
21		to retire power plants when found to be uneconomic as compared with market

1		alternatives. Again, in this case the retirement decision would not be affected by
2		the presence or absence of Rider RRS, assuming prudent behavior.
3		
4		Scenario No. 3 assumes low future PJM prices, the presence of Rider RRS, and
5		imprudent behavior by the FE Utilities and FES. In this case, the Utilities'
6		contention is partially right that Rider RRS "saves" continued operation of the
7		plants. However, it can only do so by imposing a potential multi-billion dollar
8		cost penalty on customers. This is a multi-billion dollar subsidy to FE
9		shareholders. Unfortunately, this cost penalty will severely harm the local
10		economy through the mechanisms described above. This economic harm is
11		ignored by witness Murley.
12		
13	Q45.	SETTING ASIDE THE ECONOMIC IMPACT HARM FROM HIGHER
14		ELECTRIC RATES THAT WOULD RESULT FROM RIDER RRS, DO YOU
15		HAVE ANY CONCERNS WITH WITNESS MURLEY'S STUDY?
16	A45.	Yes. Witness Murley is utilizing plant level cost and output data supplied by the
17		FE Utilities along with the IMPLAN model. That model is a standard tool often
18		used to provide an understanding of economic impacts. That said, there are
19		aspects of the study that can be misunderstood and may be misleading.

1 Q46. PLEASE EXPLAIN.

2	A46.	At the outset, Ms. Murley uses "output" loss (i.e., the \$1 billion per year) as one
3		of her impact metrics. ²⁸ However, it appears that "output" is mostly a measure of
4		the value of generation supply from selling power into the PJM market at the two
5		plants. (For Sammis, this is \$502 million out of a total of \$586 million.) This is
6		not a useful measure of the local economic impact. A far more valid measure is
7		the modeled impact on personal income, which totals about \$170 million for both
8		plants combined (inclusive of multiplier effects). This is dramatically lower than
9		the asserted adverse "economic impact" of \$1 billion, but it is a more meaningful
10		figure.
11		
12		A second concern pertains to the Davis-Besse nuclear power plant. Ms. Murley
13		assumes the plant shuts down, all employees and contractors are laid off
14		immediately, and that is the end of it. That is not what would happen. The
15		closure of Davis-Besse (if it were to occur) would require the start of
16		decommissioning for the nuclear power plant. That would be an enormous
17		undertaking, requiring a large on-site staff and considerable on-site activity by
18		numerous contractors or contract employees. The Davis-Besse plant site would
19		continue to be a major local employer and source of intense economic activity for
20		years to come. Her study ignores the decommissioning work and its positive

21 economic impacts. On a related matter, it must be noted that additional

²⁸ Murley Testimony, at 4 and 10.

1		unwarranted negative economic impacts on customers and businesses located in
2		the Utilities' service area will take place if decommissioning costs are included in
3		the PPA charged to consumers.
4		
5	Q47.	DO YOU HAVE ANY OTHER CONCERNS?
6	A47.	Yes. The type of analysis conducted by Ms. Murley with IMPLAN and plant-
7		level data is a hypothetical short-term depiction of potential economic impacts. In
8		reality, however, it does not describe very accurately the longer-term impacts of
9		plant closure. The regional and state economies are dynamic and resilient. If
10		plant closures were to occur, labor market and other market adjustments would
11		take place over time. Some workers may find employment at other new efficient
12		generation facilities constructed to replace the outdated inefficient generation
13		facilities. Other workers may retire or transfer to other jobs at FES or affiliated
14		companies. In either case, they would continue to receive income. Some may
15		move out of the locality to take other jobs, while others may find other local jobs
16		or even start their own businesses.
17		
18		All of this, of course, takes time and cannot be readily modeled. The point is that
19		the "snap shot" economic impacts presented by the Utilities are essentially static
20		estimates and do not account for real world market adjustments. This limitation

21

46

and perspective needs to be understood when considering her modeled results.

- 1 V. SUMMARY
- 2
- 3 Q48. PLEASE SUMMARIZE YOUR FINDINGS CONCERNING THE ESP
- 4

VERSUS MRO TEST.

A48. The FE Utilities' witness Fanelli finds a \$2.0 billion net benefit for the proposed
ESP IV versus the MRO, along with certain claimed "qualitative" benefits.
However, this claimed benefit is based on a 15-year set of projections pertaining
to Rider RRS which results are both doubtful and highly speculative. Had he
employed the three-year term of ESP IV, which is common practice in Ohio, he
would have obtained a ratepayer detriment in excess of \$400 million, based on the
Utilities' own projections of Rider RRS impacts.

12

My testimony urges the use of the three-year ESP term for the ESP versus MRO 13 test. I obtain a probable ratepayer detriment of roughly \$500 to \$600 million. 14 15 This uses the Utilities' own projections for Rider RRS, along with a potential ratepayer net cost for Rider DCR of about \$90 million to \$180 million (as 16 17 compared to conventional base rate case cost recovery). While I strongly 18 recommend against the use of the unreliable and highly speculative 15-year test, my analysis finds such a test would produce an estimated \$3.1 billion ratepayer 19 determent. This result incorporates OCC/NOPEC witness Wilson's medium 20 21 market price scenario.

1		Finally, my testimony explains why the "qualitative" benefits claimed by Mr.
2		Fanelli are either unpersuasive, minor in importance, or attainable absent the
3		proposed ESP IV. In particular, my testimony explains why the claimed
4		"economic impact" benefit of Rider RRS is incorrect.
5		
6	Q49.	PLEASE SUMMARIZE YOUR CRITICISMS OF THE ECONOMIC IMPACT
7		BENEFIT.
8	A49.	While I certainly agree that the FES unregulated Sammis and Davis-Besse power
9		plants are important employers, the claimed economic benefit analysis is neither
10		useful in this proceeding nor correct. In order for this analysis to be meaningful it
11		would be necessary to assume that Sammis and/or Davis-Besse plants could not
12		survive as unregulated merchant plants. But the Utilities' own market projections
13		demonstrate that both plants would be highly profitable with or without Rider
14		RRS. It is certainly possible that this optimistic outlook is wrong and in the future
15		the plants cannot earn sufficient revenue to cover their "to go" costs. In such a
16		case, the plants would be retired even under Rider RRS, as long as the Utilities
17		and affiliate counter-party FES act prudently and make economically correct
18		decisions.
19		
20		The other possibility is highly disturbing. This possible scenario assumes low
21		market prices but the Utilities and FES imprudently insist on continued operation
22		of uneconomic power plants, thereby imposing potentially multi-billion dollar

1		losses on ratepayers in order to enhance FES profits. This ratepayer economic
2		loss would have far reaching and severe negative consequences for the Utilities'
3		service area economies.
4		
5		All of this is ignored by Utilities' witness Murley. My testimony describes other
6		concerns that I have with her economic impact study that result in those impacts
7		being overstated.
8		
9	VI.	CONCLUSION
10		
11	Q50.	DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?
12	A50.	Yes, it does. However, I reserve the right to update as outstanding discovery
13		information or new information becomes available.

CERTIFICATE OF SERVICE

It is hereby certified that a true copy of the foregoing Direct Testimony of

Matthew I. Kahal on Behalf of The Ohio Consumers' Counsel and The Northeast Ohio

Public Energy Council was served via electronic transmission this 22nd day of December,

2014.

<u>/s/ Larry S. Sauer</u> Larry S. Sauer Deputy Consumers' Counsel

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APPENDIX A

QUALIFICATIONS OF

MATTHEW I. KAHAL

MATTHEW I. KAHAL

Since 2001, Mr. Kahal has worked as an independent consulting economist, specializing in energy economics, public utility regulation, and utility financial studies. Over the past three decades, his work has encompassed electric utility integrated resource planning (IRP), power plant licensing, environmental compliance, and utility financial issues. In the financial area, he has conducted numerous cost of capital studies and addressed other financial issues for electric, gas, telephone, and water utilities. Mr. Kahal's work in recent years has expanded to electric power markets, mergers, and various aspects of regulation.

Mr. Kahal has provided expert testimony in approximately 400 cases before state and federal regulatory commissions, federal courts, and the U.S. Congress. His testimony has covered need for power, integrated resource planning, cost of capital, purchased power practices and contracts, merger economics, industry restructuring, and various other regulatory and public policy issues.

Education

B.A. (Economics) - University of Maryland, 1971

M.A. (Economics) - University of Maryland, 1974

Ph.D. candidacy – University of Maryland, completed all course work and qualifying examinations.

Previous Employment

1981-2001	Founding Principal, Vice President, and President Exeter Associates, Inc. Bethesda, MD
1980-1981	Member of the Economic Evaluation Directorate The Aerospace Corporation Washington, D.C.
1977-1980	Economist Washington, D.C. consulting firm
1972-1977	Research/Teaching Assistant and Instructor Department of Economics, University of Maryland (College Park) Lecturer in Business and Economics Montgomery College (Rockville, MD)

Professional Experience

Mr. Kahal has more than thirty years' experience managing and conducting consulting assignments relating to public utility economics and regulation. In 1981, he and five colleagues founded the firm of Exeter Associates, Inc., and for the next 20 years he served as a Principal and corporate officer of the firm. During that time, he supervised multi-million dollar support contracts with the State of Maryland and directed the technical work conducted by both Exeter professional staff and numerous subcontractors. Additionally, Mr. Kahal took the lead role at Exeter in consulting to the firm's other governmental and private clients in the areas of financial analysis, utility mergers, electric restructuring, and utility purchase power contracts.

At the Aerospace Corporation, Mr. Kahal served as an economic consultant to the Strategic Petroleum Reserve (SPR). In that capacity, he participated in a detailed financial assessment of the SPR, and developed an econometric forecasting model of U.S. petroleum industry inventories. That study has been used to determine the extent to which private sector petroleum stocks can be expected to protect the U.S. from the impacts of oil import interruptions.

Before entering consulting, Mr. Kahal held faculty positions with the Department of Economics at the University of Maryland and with Montgomery College, teaching courses on economic principles, business, and economic development.

Publications and Consulting Reports

<u>Projected Electric Power Demands of the Baltimore Gas and Electric Company</u>, Maryland Power Plant Siting Program, 1979.

<u>Projected Electric Power Demands of the Allegheny Power System</u>, Maryland Power Plant Siting Program, January 1980.

An Econometric Forecast of Electric Energy and Peak Demand on the Delmarva Peninsula, Maryland Power Plant Siting Program, March 1980 (with Ralph E. Miller).

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<u>Petroleum Inventories and the Strategic Petroleum Reserve</u>, The Aerospace Corporation, prepared for the Strategic Petroleum Reserve Office, U.S. Department of Energy, December 1980.

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<u>Power Plant Cumulative Environmental Impact Report</u>, contributing author (Paul E. Miller, ed.) Maryland Department of Natural Resources, January 1984.

<u>Projected Electric Power Demands for the Potomac Electric Power Company</u>, three volumes (with Steven L. Estomin), prepared for the Maryland Power Plant Siting Program, March 1984.

"An Assessment of the State-of-the-Art of Gas Utility Load Forecasting" (with Thomas Bacon, Jr. and Steven L. Estomin), published in the <u>Proceedings of the Fourth NARUC</u> <u>Biennial Regulatory Information Conference</u>, 1984.

"Nuclear Power and Investor Perceptions of Risk" (with Ralph E. Miller), published in <u>The Energy Industries in Transition: 1985-2000</u> (John P. Weyant and Dorothy Sheffield, eds.), 1984. <u>The Financial Impact of Potential Department of Energy Rate Recommendations on the</u> <u>Commonwealth Edison Company</u>, prepared for the U.S. Department of Energy, October 1984.

"Discussion Comments," published in <u>Impact of Deregulation and Market Forces on</u> <u>Public Utilities: The Future of Regulation</u> (Harry Trebing, ed.), Institute of Public Utilities, Michigan State University, 1985.

An Econometric Forecast of the Electric Power Loads of Baltimore Gas and Electric Company, two volumes (with others), prepared for the Maryland Power Plant Siting Program, 1985.

<u>A Survey and Evaluation of Demand Forecast Methods in the Gas Utility Industry</u>, prepared for the Public Utilities Commission of Ohio, Forecasting Division, November 1985 (with Terence Manuel).

<u>A Review and Evaluation of the Load Forecasts of Houston Lighting & Power Company</u> and Central Power & Light Company – Past and Present, prepared for the Texas Public Utility Commission, December 1985 (with Marvin H. Kahn).

<u>Power Plant Cumulative Environmental Impact Report for Maryland</u>, principal author of three of the eight chapters in the report (Paul E. Miller, ed.), PPSP-CEIR-5, March 1986.

"Potential Emissions Reduction from Conservation, Load Management, and Alternative Power," published in <u>Acid Deposition in Maryland: A Report to the Governor and</u> <u>General Assembly</u>, Maryland Power Plant Research Program, AD-87-1, January 1987.

Determination of Retrofit Costs at the Oyster Creek Nuclear Generating Station, March 1988, prepared for Versar, Inc., New Jersey Department of Environmental Protection.

<u>Excess Deferred Taxes and the Telephone Utility Industry</u>, April 1988, prepared on behalf of the National Association of State Utility Consumer Advocates.

Toward a Proposed Federal Policy for Independent Power Producers, comments prepared on behalf of the Indiana Consumer Counselor, FERC Docket EL87-67-000, November 1987.

<u>Review and Discussion of Regulations Governing Bidding Programs</u>, prepared for the Pennsylvania Office of Consumer Advocate, June 1988.

<u>A Review of the Proposed Revisions to the FERC Administrative Rules on Avoided</u> <u>Costs and Related Issues</u>, prepared for the Pennsylvania Office of Consumer Advocate, April 1988. <u>Review and Comments on the FERC NOPR Concerning Independent Power Producers</u>, prepared for the Pennsylvania Office of Consumer Advocate, June 1988.

<u>The Costs to Maryland Utilities and Ratepayers of an Acid Rain Control Strategy – An</u> <u>Updated Analysis</u>, prepared for the Maryland Power Plant Research Program, October 1987, AD-88-4.

"Comments," in <u>New Regulatory and Management Strategies in a Changing Market</u> <u>Environment</u> (Harry M. Trebing and Patrick C. Mann, editors), Proceedings of the Institute of Public Utilities Eighteenth Annual Conference, 1987.

<u>Electric Power Resource Planning for the Potomac Electric Power Company</u>, prepared for the Maryland Power Plant Research Program, July 1988.

<u>Power Plant Cumulative Environmental Impact Report for Maryland</u> (Thomas E. Magette, ed.), authored two chapters, November 1988, PPRP-CEIR-6. <u>Resource Planning and Competitive Bidding for Delmarva Power & Light Company</u>, October 1990, prepared for the Maryland Department of Natural Resources (with M. Fullenbaum).

<u>Electric Power Rate Increases and the Cleveland Area Economy</u>, prepared for the Northeast Ohio Areawide Coordinating Agency, October 1988.

An Economic and Need for Power Evaluation of Baltimore Gas & Electric Company's <u>Perryman Plant</u>, May 1991, prepared for the Maryland Department of Natural Resources (with M. Fullenbaum).

<u>The Cost of Equity Capital for the Bell Local Exchange Companies in a New Era of</u> <u>Regulation</u>, October 1991, presented at the Atlantic Economic Society 32nd Conference, Washington, D.C.

<u>A Need for Power Review of Delmarva Power & Light Company's Dorchester Unit 1</u> <u>Power Plant</u>, March 1993, prepared for the Maryland Department of National Resources (with M. Fullenbaum).

<u>The AES Warrior Run Project: Impact on Western Maryland Economic Activity and</u> <u>Electric Rates</u>, February 1993, prepared for the Maryland Power Plant Research Program (with Peter Hall).

<u>An Economic Perspective on Competition and the Electric Utility Industry</u>, November 1994, prepared for the Electric Consumers' Alliance.

<u>PEPCO's Clean Air Act Compliance Plan: Status Report</u>, prepared for the Maryland Power Plant Research Plan, January 1995 (w/Diane Mountain, Environmental Resources Management, Inc.).

<u>The FERC Open Access Rulemaking: A Review of the Issues</u>, prepared for the Indiana Office of Utility Consumer Counselor and the Pennsylvania Office of Consumer Advocate, June 1995.

<u>A Status Report on Electric Utility Restructuring: Issues for Maryland</u>, prepared for the Maryland Power Plant Research Program, November 1995 (with Daphne Psacharopoulos).

Modeling the Financial Impacts on the Bell Regional Holding Companies from Changes in Access Rates, prepared for MCI Corporation, May 1996.

<u>The CSEF Electric Deregulation Study: Economic Miracle or the Economists' Cold</u> <u>Fusion?</u>, prepared for the Electric Consumers' Alliance, Indianapolis, Indiana, October 1996.

<u>Reducing Rates for Interstate Access Service: Financial Impacts on the Bell Regional</u> <u>Holding Companies</u>, prepared for MCI Corporation, May 1997.

<u>The New Hampshire Retail Competition Pilot Program: A Preliminary Evaluation</u>, July 1997, prepared for the Electric Consumers' Alliance (with Jerome D. Mierzwa).

<u>Electric Restructuring and the Environment: Issue Identification for Maryland</u>, March 1997, prepared for the Maryland Power Plant Research Program (with Environmental Resource Management, Inc.).

<u>An Analysis of Electric Utility Embedded Power Supply Costs</u>, prepared for Power-Gen International Conference, Dallas, Texas, December 1997.

<u>Market Power Outlook for Generation Supply in Louisiana</u>, December 2000, prepared for the Louisiana Public Service Commission (with others).

<u>A Review of Issues Concerning Electric Power Capacity Markets</u>, prepared for the Maryland Power Plant Research Program, December 2001 (with B. Hobbs and J. Inon). <u>The Economic Feasibility of Air Emissions Controls at the Brandon Shores and</u> <u>Morgantown Coal-fired Power Plants</u>, February 2005 (prepared for the Chesapeake Bay Foundation).

The Economic Feasibility of Power Plant Retirements on the Entergy System, September 2005, with Phil Hayet (prepared for the Louisiana Public Service Commission).

Expert Report on Capital Structure, Equity and Debt Costs, prepared for the Edmonton Regional Water Customers Group, August 30, 2006.

<u>Maryland's Options to Reduce and Stabilize Electric Power Prices Following</u> <u>Restructuring</u>, with Steven L. Estomin, prepared for the Power Plant Research Program, Maryland Department of Natural Resources, September 2006.

Expert Report of Matthew I. Kahal, on behalf of the U. S. Department of Justice, August 2008, Civil Action No. IP-99-1693C-MIS.

Conference and Workshop Presentations

Workshop on State Load Forecasting Programs, sponsored by the Nuclear Regulatory Commission and Oak Ridge National Laboratory, February 1982 (presentation on forecasting methodology).

Fourteenth Annual Conference of the Michigan State University Institute for Public Utilities, December 1982 (presentation on problems in forecasting).

Conference on Conservation and Load Management, sponsored by the Massachusetts Energy Facilities Siting Council, May 1983 (presentation on cost-benefit criteria).

Maryland Conference on Load Forecasting, sponsored by the Maryland Power Plant Siting Program and the Maryland Public Service Commission, June 1983 (presentation on overforecasting power demands).

The 5th Annual Meetings of the International Association of Energy Economists, June 1983 (presentation on evaluating weatherization programs).

The NARUC Advanced Regulatory Studies Program (presented lectures on capacity planning for electric utilities), February 1984.

The 16th Annual Conference of the Institute of Public Utilities, Michigan State University (discussant on phase-in and excess capacity), December 1984.

U.S. Department of Energy Utilities Conference, Las Vegas, Nevada (presentation of current and future regulatory issues), May 1985.

The 18th Annual Conference of the Institute of Public Utilities, Michigan State University, Williamsburg, Virginia, December 1986 (discussant on cogeneration).

The NRECA Conference on Load Forecasting, sponsored by the National Rural Electric Cooperative Association, New Orleans, Louisiana, December 1987 (presentation on load forecast accuracy).

The Second Rutgers/New Jersey Department of Commerce Annual Conference on Energy Policy in the Middle Atlantic States, Rutgers University, April 1988 (presentation on spot pricing of electricity).

The NASUCA 1988 Mid-Year Meeting, Annapolis, Maryland, June 1988, sponsored by the National Association of State Utility Consumer Advocates (presentation on the FERC electricity avoided cost NOPRs).

The Thirty-Second Atlantic Economic Society Conference, Washington, D.C., October 1991 (presentation of a paper on cost of capital issues for the Bell Operating Companies).

The NASUCA 1993 Mid-Year Meeting, St. Louis, Missouri, sponsored by the National Association of State Utility Consumer Advocates, June 1993 (presentation on regulatory issues concerning electric utility mergers).

The NASUCA and NARUC annual meetings in New York City, November 1993 (presentations and panel discussions on the emerging FERC policies on transmission pricing).

The NASUCA annual meetings in Reno, Nevada, November 1994 (presentation concerning the FERC NOPR on stranded cost recovery).

U.S. Department of Energy Utilities/Energy Management Workshop, March 1995 (presentation concerning electric utility competition).

The 1995 NASUCA Mid-Year Meeting, Breckenridge, Colorado, June 1995 (presentation concerning the FERC rulemaking on electric transmission open access). The 1996 NASUCA Mid-Year Meeting, Chicago, Illinois, June 1996 (presentation concerning electric utility merger issues).

Conference on "Restructuring the Electric Industry," sponsored by the National Consumers League and Electric Consumers Alliance, Washington, D.C., May 1997 (presentation on retail access pilot programs).

The 1997 Mid-Atlantic Conference of Regulatory Utilities Commissioners (MARUC), Hot Springs, Virginia, July 1997 (presentation concerning electric deregulation issues).

Power-Gen '97 International Conference, Dallas, Texas, December 1997 (presentation concerning utility embedded costs of generation supply).

Consumer Summit on Electric Competition, sponsored by the National Consumers League and Electric Consumers' Alliance, Washington, D.C., March 2001 (presentation concerning generation supply and reliability).

National Association of State Utility Consumer Advocates, Mid-Year Meetings, Austin, Texas, June 16-17, 2002 (presenter and panelist on RTO/Standard Market Design issues).

Louisiana State Bar Association, Public Utility Section, Baton Rouge, Louisiana, October 2, 2002 (presentation on Performance-Based Ratemaking and panelist on RTO issues).

Virginia State Corporation Commission/Virginia State Bar, Twenty-Second National Regulatory Conference, Williamsburg, Virginia, May 10, 2004 (presentation on Electric Transmission System Planning).

APPENDIX B

LIST OF PAST TESTIMONY OF

MATTHEW I. KAHAL

1.	27374 & 27375 October 1978	Long Island Lighting Company	New York Counties	Nassau & Suffolk	Economic Impacts of Proposed Rate Increase
2.	6807 January 1978	Generic	Maryland	MD Power Plant Siting Program	Load Forecasting
3.	78-676-EL-AIR February 1978	Duke Energy Ohio	Ohio	Ohio Consumers' Counsel	Test Year Sales and Revenues
4.	17667 May 1979	Alabama Power Company	Alabama	Attorney General	Test Year Sales, Revenues, Costs, and Load Forecasts
5.	None April 1980	Tennessee Valley Authority	TVA Board	League of Women Voters	Time-of-Use Pricing
6.	R-80021082	West Penn Power Company	Pennsylvania	Office of Consumer Advocate	Load Forecasting, Marginal Cost pricing
7.	7259 (Phase I) October 1980	Potomac Edison Company	Maryland	MD Power Plant Siting Program	Load Forecasting
8.	7222 December 1980	Delmarva Power & Light Company	Maryland	MD Power Plant Siting Program	Need for Plant, Load Forecasting
9.	7441 June 1981	Potomac Electric Power Company	Maryland	Commission Staff	PURPA Standards
10.	7159 May 1980	Baltimore Gas & Electric	Maryland	Commission Staff	Time-of-Use Pricing
11.	81-044-E-42T	Monongahela Power	West Virginia	Commission Staff	Time-of-Use Rates
12.	7259 (Phase II) November 1981	Potomac Edison Company	Maryland	MD Power Plant Siting Program	Load Forecasting, Load Management
13.	1606 September 1981	Blackstone Valley Electric and Narragansett	Rhode Island	Division of Public Utilities	PURPA Standards
14.	RID 1819 April 1982	Pennsylvania Bell	Pennsylvania	Office of Consumer Advocate	Rate of Return
15.	82-0152 July 1982	Illinois Power Company	Illinois	U.S. Department of Defense	Rate of Return, CWIP

16.	7559 September 1982	Potomac Edison Company	Maryland	Commission Staff	Cogeneration
17.	820150-EU September 1982	Gulf Power Company	Florida	Federal Executive Agencies	Rate of Return, CWIP
18.	82-057-15 January 1983	Mountain Fuel Supply Company	Utah	Federal Executive Agencies	Rate of Return, Capital Structure
19.	5200 August 1983	Texas Electric Service Company	Texas	Federal Executive Agencies	Cost of Equity
20.	28069 August 1983	Oklahoma Natural Gas	Oklahoma	Federal Executive Agencies	Rate of Return, deferred taxes, capital structure, attrition
21.	83-0537 February 1984	Commonwealth Edison Company	Illinois	U.S. Department of Energy	Rate of Return, capital structure, financial capability
22.	84-035-01 June 1984	Utah Power & Light Company	Utah	Federal Executive Agencies	Rate of Return
23.	U-1009-137 July 1984	Utah Power & Light Company	Idaho	U.S. Department of Energy	Rate of Return, financial condition
24.	R-842590 August 1984	Philadelphia Electric Company	Pennsylvania	Office of Consumer Advocate	Rate of Return
25.	840086-EI August 1984	Gulf Power Company	Florida	Federal Executive Agencies	Rate of Return, CWIP
26.	84-122-E August 1984	Carolina Power & Light Company	South Carolina	South Carolina Consumer Advocate	Rate of Return, CWIP, load forecasting
27.	CGC-83-G & CGC-84-G October 1984	Columbia Gas of Ohio	Ohio	Ohio Division of Energy	Load forecasting
28.	R-842621 October 1984	Western Pennsylvania Water Company	Pennsylvania	Office of Consumer Advocate	Test year sales
29.	R-842710 January 1985	ALLTEL Pennsylvania Inc.	Pennsylvania	Office of Consumer Advocate	Rate of Return
30.	ER-504 February 1985	Allegheny Generating Company	FERC	Office of Consumer Advocate	Rate of Return

31.	R-842632 March 1985	West Penn Power Company	Pennsylvania	Office of Consumer Advocate	Rate of Return, conservation, time-of-use rates
32.	83-0537 & 84-0555 April 1985	Commonwealth Edison Company	Illinois	U.S. Department of Energy	Rate of Return, incentive rates, rate base
33.	Rulemaking Docket No. 11, May 1985	Generic	Delaware	Delaware Commission Staff	Interest rates on refunds
34.	29450 July 1985	Oklahoma Gas & Electric Company	Oklahoma	Oklahoma Attorney General	Rate of Return, CWIP in rate base
35.	1811 August 1985	Bristol County Water Company	Rhode Island	Division of Public Utilities	Rate of Return, capital Structure
36.	R-850044 & R-850045 August 1985	Quaker State & Continental Telephone Companies	Pennsylvania	Office of Consumer Advocate	Rate of Return
37.	R-850174 November 1985	Philadelphia Suburban Water Company	Pennsylvania	Office of Consumer Advocate	Rate of Return, financial conditions
38.	U-1006-265 March 1986	Idaho Power Company	Idaho	U.S. Department of Energy	Power supply costs and models
39.	EL-86-37 & EL-86-38 September 1986	Allegheny Generating Company	FERC	PA Office of Consumer Advocate	Rate of Return
40.	R-850287 June 1986	National Fuel Gas Distribution Corp.	Pennsylvania	Office of Consumer Advocate	Rate of Return
41.	1849 August 1986	Blackstone Valley Electric	Rhode Island	Division of Public Utilities	Rate of Return, financial condition
42.	86-297-GA-AIR November 1986	East Ohio Gas Company	Ohio	Ohio Consumers' Counsel	Rate of Return
43.	U-16945 December 1986	Louisiana Power & Light Company	Louisiana	Public Service Commission	Rate of Return, rate phase-in plan
44.	Case No. 7972 February 1987	Potomac Electric Power Company	Maryland	Commission Staff	Generation capacity planning, purchased power contract
45.	EL-86-58 & EL-86-59 March 1987	System Energy Resources and Middle South Services	FERC	Louisiana PSC	Rate of Return

46.	ER-87-72-001 April 1987	Orange & Rockland	FERC	PA Office of Consumer Advocate	Rate of Return
47.	U-16945 April 1987	Louisiana Power & Light Company	Louisiana	Commission Staff	Revenue requirement update phase-in plan
48.	P-870196 May 1987	Pennsylvania Electric Company	Pennsylvania	Office of Consumer Advocate	Cogeneration contract
49.	86-2025-EL-AIR June 1987	Cleveland Electric Illuminating Company	Ohio	Ohio Consumers' Counsel	Rate of Return
50.	86-2026-EL-AIR June 1987	Toledo Edison Company	Ohio	Ohio Consumers' Counsel	Rate of Return
51.	87-4 June 1987	Delmarva Power & Light Company	Delaware	Commission Staff	Cogeneration/small power
52.	1872 July 1987	Newport Electric Company	Rhode Island	Commission Staff	Rate of Return
53.	WO 8606654 July 1987	Atlantic City Sewerage Company	New Jersey	Resorts International	Financial condition
54.	7510 August 1987	West Texas Utilities Company	Texas	Federal Executive Agencies	Rate of Return, phase-in
55.	8063 Phase I October 1987	Potomac Electric Power Company	Maryland	Power Plant Research Program	Economics of power plant site selection
56.	00439 November 1987	Oklahoma Gas & Electric Company	Oklahoma	Smith Cogeneration	Cogeneration economics
57.	RP-87-103 February 1988	Panhandle Eastern Pipe Line Company	FERC	Indiana Utility Consumer Counselor	Rate of Return
58.	EC-88-2-000 February 1988	Utah Power & Light Co. PacifiCorp	FERC	Nucor Steel	Merger economics
59.	87-0427 February 1988	Commonwealth Edison Company	Illinois	Federal Executive Agencies	Financial projections
60.	870840 February 1988	Philadelphia Suburban Water Company	Pennsylvania	Office of Consumer Advocate	Rate of Return
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61.	870832 March 1988	Columbia Gas of Pennsylvania	Pennsylvania	Office of Consumer Advocate	Rate of Return
62.	8063 Phase II July 1988	Potomac Electric Power Company	Maryland	Power Plant Research Program	Power supply study
63.	8102 July 1988	Southern Maryland Electric Cooperative	Maryland	Power Plant Research Program	Power supply study
64.	10105 August 1988	South Central Bell Telephone Co.	Kentucky	Attorney General	Rate of Return, incentive regulation
65.	00345 August 1988	Oklahoma Gas & Electric Company	Oklahoma	Smith Cogeneration	Need for power
66.	U-17906 September 1988	Louisiana Power & Light Company	Louisiana	Commission Staff	Rate of Return, nuclear power costs industrial contracts
67.	88-170-EL-AIR October 1988	Cleveland Electric Illuminating Co.	Ohio	Northeast-Ohio Areawide Coordinating Agency	Economic impact study
68.	1914 December 1988	Providence Gas Company	Rhode Island	Commission Staff	Rate of Return
69.	U-12636 & U-17649 February 1989	Louisiana Power & Light Company	Louisiana	Commission Staff	Disposition of litigation proceeds
70.	00345 February 1989	Oklahoma Gas & Electric Company	Oklahoma	Smith Cogeneration	Load forecasting
71.	RP88-209 March 1989	Natural Gas Pipeline of America	FERC	Indiana Utility Consumer Counselor	Rate of Return
72.	8425 March 1989	Houston Lighting & Power Company	Texas	U.S. Department of Energy	Rate of Return
73.	EL89-30-000 April 1989	Central Illinois Public Service Company	FERC	Soyland Power Coop, Inc.	Rate of Return
74.	R-891208 May 1989	Pennsylvania American Water Company	Pennsylvania	Office of Consumer Advocate	Rate of Return

75.	89-0033 May 1989	Illinois Bell Telephone Company	Illinois	Citizens Utility Board	Rate of Return
76.	881167-EI May 1989	Gulf Power Company	Florida	Federal Executive Agencies	Rate of Return
77.	R-891218 July 1989	National Fuel Gas Distribution Company	Pennsylvania	Office of Consumer Advocate	Sales forecasting
78.	8063, Phase III Sept. 1989	Potomac Electric Power Company	Maryland	Depart. Natural Resources	Emissions Controls
79.	37414-S2 October 1989	Public Service Company of Indiana	Indiana	Utility Consumer Counselor	Rate of Return, DSM, off- system sales, incentive regulation
80.	October 1989	Generic	U.S. House of Reps. Comm. on Ways & Means	N/A	Excess deferred income tax
81.	38728 November 1989	Indiana Michigan Power Company	Indiana	Utility Consumer Counselor	Rate of Return
82.	RP89-49-000 December 1989	National Fuel Gas Supply Corporation	FERC	PA Office of Consumer Advocate	Rate of Return
83.	R-891364 December 1989	Philadelphia Electric Company	Pennsylvania	PA Office of Consumer Advocate	Financial impacts (Surrebuttal only)
84.	RP89-160-000 January 1990	Trunkline Gas Company	FERC	Indiana Utility Consumer Counselor	Rate of Return
85.	EL90-16-000 November 1990	System Energy Resources, Inc.	FERC	Louisiana Public Service Commission	Rate of Return
86.	89-624 March 1990	Bell Atlantic	FCC	PA Office of Consumer Advocate	Rate of Return
87.	8245 March 1990	Potomac Edison Company	Maryland	Depart. Natural Resources	Avoided Cost
88.	000586 March 1990	Public Service Company of Oklahoma	Oklahoma	Smith Cogeneration Mgmt.	Need for Power
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89.	38868 March 1990	Indianapolis Water Company	Indiana	Utility Consumer Counselor	Rate of Return
90.	1946 March 1990	Blackstone Valley Electric Company	Rhode Island	Division of Public Utilities	Rate of Return
91.	000776 April 1990	Oklahoma Gas & Electric Company	Oklahoma	Smith Cogeneration Mgmt.	Need for Power
92.	890366 May 1990, December 1990	Metropolitan Edison Company	Pennsylvania	Office of Consumer Advocate	Competitive Bidding Program Avoided Costs
93.	EC-90-10-000 May 1990	Northeast Utilities	FERC	Maine PUC, et al.	Merger, Market Power, Transmission Access
94.	ER-891109125 July 1990	Jersey Central Power & Light	New Jersey	Rate Counsel	Rate of Return
95.	R-901670 July 1990	National Fuel Gas Distribution Corp.	Pennsylvania	Office of Consumer Advocate	Rate of Return Test year sales
96.	8201 October 1990	Delmarva Power & Light Company	Maryland	Depart. Natural Resources	Competitive Bidding, Resource Planning
97.	EL90-45-000 April 1991	Entergy Services, Inc.	FERC	Louisiana PSC	Rate of Return
98.	GR90080786J January 1991	New Jersey Natural Gas	New Jersey	Rate Counsel	Rate of Return
99.	90-256 January 1991	South Central Bell Telephone Company	Kentucky	Attorney General	Rate of Return
100.	U-17949A February 1991	South Central Bell Telephone Company	Louisiana	Louisiana PSC	Rate of Return
101.	ER90091090J April 1991	Atlantic City Electric Company	New Jersey	Rate Counsel	Rate of Return
102.	8241, Phase I April 1991	Baltimore Gas & Electric Company	Maryland	Dept. of Natural Resources	Environmental controls

103.	8241, Phase II May 1991	Baltimore Gas & Electric Company	Maryland	Dept. of Natural Resources	Need for Power, Resource Planning
104.	39128 May 1991	Indianapolis Water Company	Indiana	Utility Consumer Counselor	Rate of Return, rate base, financial planning
105.	P-900485 May 1991	Duquesne Light Company	Pennsylvania	Office of Consumer Advocate	Purchased power contract and related ratemaking
106.	G900240	Metropolitan Edison Company	Pennsylvania	Office of Consumer	Purchased power contract
	May 1991	Pennsylvania Electric Company		Advocate	and related ratemaking
107.	GR901213915 May 1991	Elizabethtown Gas Company	New Jersey	Rate Counsel	Rate of Return
108.	91-5032 August 1991	Nevada Power Company	Nevada	U.S. Dept. of Energy	Rate of Return
109.	EL90-48-000 November 1991	Entergy Services	FERC	Louisiana PSC	Capacity transfer
110.	000662 September 1991	Southwestern Bell Telephone	Oklahoma	Attorney General	Rate of Return
111.	U-19236 October 1991	Arkansas Louisiana Gas Company	Louisiana	Louisiana PSC Staff	Rate of Return
112.	U-19237 December 1991	Louisiana Gas Service Company	Louisiana	Louisiana PSC Staff	Rate of Return
113.	ER91030356J October 1991	Rockland Electric Company	New Jersey	Rate Counsel	Rate of Return
114.	GR91071243J February 1992	South Jersey Gas Company	New Jersey	Rate Counsel	Rate of Return
115.	GR91081393J March 1992	New Jersey Natural Gas Company	New Jersey	Rate Counsel	Rate of Return
116.	P-870235, et al. March 1992	Pennsylvania Electric Company	Pennsylvania	Office of Consumer Advocate	Cogeneration contracts
117.	8413 March 1992	Potomac Electric Power Company	Maryland	Dept. of Natural Resources	IPP purchased power contracts
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118.	39236 March 1992	Indianapolis Power & Light Company	Indiana	Utility Consumer Counselor	Least-cost planning Need for power
119.	R-912164 April 1992	Equitable Gas Company	Pennsylvania	Office of Consumer Advocate	Rate of Return
120.	ER-91111698J May 1992	Public Service Electric & Gas Company	New Jersey	Rate Counsel	Rate of Return
121.	U-19631 June 1992	Trans Louisiana Gas Company	Louisiana	PSC Staff	Rate of Return
122.	ER-91121820J July 1992	Jersey Central Power & Light Company	New Jersey	Rate Counsel	Rate of Return
123.	R-00922314 August 1992	Metropolitan Edison Company	Pennsylvania	Office of Consumer Advocate	Rate of Return
124.	92-049-05 September 1992	US West Communications	Utah	Committee of Consumer Services	Rate of Return
125.	92PUE0037 September 1992	Commonwealth Gas Company	Virginia	Attorney General	Rate of Return
126.	EC92-21-000 September 1992	Entergy Services, Inc.	FERC	Louisiana PSC	Merger Impacts (Affidavit)
127.	ER92-341-000 December 1992	System Energy Resources	FERC	Louisiana PSC	Rate of Return
128.	U-19904 November 1992	Louisiana Power & Light Company	Louisiana	Staff	Merger analysis, competition competition issues
129.	8473 November 1992	Baltimore Gas & Electric Company	Maryland	Dept. of Natural Resources	QF contract evaluation
130.	IPC-E-92-25 January 1993	Idaho Power Company	Idaho	Federal Executive Agencies	Power Supply Clause

131.	E002/GR-92-1185 February 1993	Northern States Power Company	Minnesota	Attorney General	Rate of Return
132.	92-102, Phase II March 1992	Central Maine Power Company	Maine	Staff	QF contracts prudence and procurements practices
133.	EC92-21-000 March 1993	Entergy Corporation	FERC	Louisiana PSC	Merger Issues
134.	8489 March 1993	Delmarva Power & Light Company	Maryland	Dept. of Natural Resources	Power Plant Certification
135.	11735 April 1993	Texas Electric Utilities Company	Texas	Federal Executives Agencies	Rate of Return
136.	2082 May 1993	Providence Gas Company	Rhode Island	Division of Public Utilities	Rate of Return
137.	P-00930715 December 1993	Bell Telephone Company of Pennsylvania	Pennsylvania	Office of Consumer Advocate	Rate of Return, Financial Projections, Bell/TCI merger
138.	R-00932670 February 1994	Pennsylvania-American Water Company	Pennsylvania	Office of Consumer Advocate	Rate of Return
139.	8583 February 1994	Conowingo Power Company	Maryland	Dept. of Natural Resources	Competitive Bidding for Power Supplies
140.	E-015/GR-94-001 April 1994	Minnesota Power & Light Company	Minnesota	Attorney General	Rate of Return
141.	CC Docket No. 94-1 May 1994	Generic Telephone	FCC	MCI Comm. Corp.	Rate of Return
142.	92-345, Phase II June 1994	Central Maine Power Company	Maine	Advocacy Staff	Price Cap Regulation Fuel Costs
143.	93-11065 April 1994	Nevada Power Company	Nevada	Federal Executive Agencies	Rate of Return
144.	94-0065 May 1994	Commonwealth Edison Company	Illinois	Federal Executive Agencies	Rate of Return
145.	GR94010002J June 1994	South Jersey Gas Company	New Jersey	Rate Counsel	Rate of Return

146.	WR94030059 July 1994	New Jersey-American Water Company	New Jersey	Rate Counsel	Rate of Return
147.	RP91-203-000 June 1994	Tennessee Gas Pipeline Company	FERC	Customer Group	Environmental Externalities (oral testimony only)
148.	ER94-998-000 July 1994	Ocean State Power	FERC	Boston Edison Company	Rate of Return
149.	R-00942986 July 1994	West Penn Power Company	Pennsylvania	Office of Consumer Advocate	Rate of Return, Emission Allowances
150.	94-121 August 1994	South Central Bell Telephone Company	Kentucky	Attorney General	Rate of Return
151.	35854-S2 November 1994	PSI Energy, Inc.	Indiana	Utility Consumer Counsel	Merger Savings and Allocations
152.	IPC-E-94-5 November 1994	Idaho Power Company	Idaho	Federal Executive Agencies	Rate of Return
153.	November 1994	Edmonton Water	Alberta, Canada	Regional Customer Group	Rate of Return (Rebuttal Only)
154.	90-256 December 1994	South Central Bell Telephone Company	Kentucky	Attorney General	Incentive Plan True-Ups
155.	U-20925 February 1995	Louisiana Power & Light Company	Louisiana	PSC Staff	Rate of Return Industrial Contracts Trust Fund Earnings
156.	R-00943231 February 1995	Pennsylvania-American Water Company	Pennsylvania	Consumer Advocate	Rate of Return
157.	8678 March 1995	Generic	Maryland	Dept. Natural Resources	Electric Competition Incentive Regulation (oral only)
158.	R-000943271 April 1995	Pennsylvania Power & Light Company	Pennsylvania	Consumer Advocate	Rate of Return Nuclear decommissioning Capacity Issues
159.	U-20925 May 1995	Louisiana Power & Light Company	Louisiana	Commission Staff	Class Cost of Service Issues
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160.	2290 June 1995	Narragansett Electric Company	Rhode Island	Division Staff	Rate of Return
161.	U-17949E June 1995	South Central Bell Telephone Company	Louisiana	Commission Staff	Rate of Return
162.	2304 July 1995	Providence Water Supply Board	Rhode Island	Division Staff	Cost recovery of Capital Spending Program
163.	ER95-625-000, et al. August 1995	PSI Energy, Inc.	FERC	Office of Utility Consumer Counselor	Rate of Return
164.	P-00950915, et al. September 1995	Paxton Creek Cogeneration Assoc.	Pennsylvania	Office of Consumer Advocate	Cogeneration Contract Amendment
165.	8702 September 1995	Potomac Edison Company	Maryland	Dept. of Natural Resources	Allocation of DSM Costs (oral only)
166.	ER95-533-001 September 1995	Ocean State Power	FERC	Boston Edison Co.	Cost of Equity
167.	40003 November 1995	PSI Energy, Inc.	Indiana	Utility Consumer Counselor	Rate of Return Retail wheeling
168.	P-55, SUB 1013 January 1996	BellSouth	North Carolina	AT&T	Rate of Return
169.	P-7, SUB 825 January 1996	Carolina Tel.	North Carolina	AT&T	Rate of Return
170.	February 1996	Generic Telephone	FCC	MCI	Cost of capital
171.	95A-531EG April 1996	Public Service Company of Colorado	Colorado	Federal Executive Agencies	Merger issues
172.	ER96-399-000 May 1996	Northern Indiana Public Service Company	FERC	Indiana Office of Utility Consumer Counselor	Cost of capital
173.	8716 June 1996	Delmarva Power & Light Company	Maryland	Dept. of Natural Resources	DSM programs
174.	8725 July 1996	BGE/PEPCO	Maryland	Md. Energy Admin.	Merger Issues

175.	U-20925 August 1996	Entergy Louisiana, Inc.	Louisiana	PSC Staff	Rate of Return Allocations Fuel Clause
176.	EC96-10-000 September 1996	BGE/PEPCO	FERC	Md. Energy Admin.	Merger issues competition
177.	EL95-53-000 November 1996	Entergy Services, Inc.	FERC	Louisiana PSC	Nuclear Decommissioning
178.	WR96100768 March 1997	Consumers NJ Water Company	New Jersey	Ratepayer Advocate	Cost of Capital
179.	WR96110818 April 1997	Middlesex Water Co.	New Jersey	Ratepayer Advocate	Cost of Capital
180.	U-11366 April 1997	Ameritech Michigan	Michigan	MCI	Access charge reform/financial condition
181.	97-074 May 1997	BellSouth	Kentucky	MCI	Rate Rebalancing financial condition
182.	2540 June 1997	New England Power	Rhode Island	PUC Staff	Divestiture Plan
183.	96-336-TP-CSS June 1997	Ameritech Ohio	Ohio	MCI	Access Charge reform Economic impacts
184.	WR97010052 July 1997	Maxim Sewerage Corp.	New Jersey	Ratepayer Advocate	Rate of Return
185.	97-300 August 1997	LG&E/KU	Kentucky	Attorney General	Merger Plan
186.	Case No. 8738 August 1997	Generic (oral testimony only)	Maryland	Dept. of Natural Resources	Electric Restructuring Policy
187.	Docket No. 2592 September 1997	Eastern Utilities	Rhode Island	PUC Staff	Generation Divestiture
188.	Case No.97-247 September 1997	Cincinnati Bell Telephone	Kentucky	MCI	Financial Condition

189.	Docket No. U-20925 November 1997	Entergy Louisiana	Louisiana	PSC Staff	Rate of Return
190.	Docket No. D97.7.90 November 1997	Montana Power Co.	Montana	Montana Consumers Counsel	Stranded Cost
191.	Docket No. EO97070459 November 1997	Jersey Central Power & Light Co.	New Jersey	Ratepayer Advocate	Stranded Cost
192.	Docket No. R-00974104 November 1997	Duquesne Light Co.	Pennsylvania	Office of Consumer Advocate	Stranded Cost
193.	Docket No. R-00973981 November 1997	West Penn Power Co.	Pennsylvania	Office of Consumer Advocate	Stranded Cost
194.	Docket No. A-1101150F0015 November 1997	Allegheny Power System DQE, Inc.	Pennsylvania	Office of Consumer Advocate	Merger Issues
195.	Docket No. WR97080615 January 1998	Consumers NJ Water Company	New Jersey	Ratepayer Advocate	Rate of Return
196.	Docket No. R-00974149 January 1998	Pennsylvania Power Company	Pennsylvania	Office of Consumer Advocate	Stranded Cost
197.	Case No. 8774 January 1998	Allegheny Power System DQE, Inc.	Maryland	Dept. of Natural Resources MD Energy Administration	Merger Issues
198.	Docket No. U-20925 (SC) March 1998	Entergy Louisiana, Inc.	Louisiana	Commission Staff	Restructuring, Stranded Costs, Market Prices
199.	Docket No. U-22092 (SC) March 1998	Entergy Gulf States, Inc.	Louisiana	Commission Staff	Restructuring, Stranded Costs, Market Prices
200.	Docket Nos. U-22092 (SC) and U-20925(SC) May 1998	Entergy Gulf States and Entergy Louisiana	Louisiana	Commission Staff	Standby Rates
201.	Docket No. WR98010015 May 1998	NJ American Water Co.	New Jersey	Ratepayer Advocate	Rate of Return
202.	Case No. 8794 December 1998	Baltimore Gas & Electric Co.	Maryland	MD Energy Admin./Dept. Of Natural Resources	Stranded Cost/ Transition Plan

203.	Case No. 8795 December 1998	Delmarva Power & Light Co.	Maryland	MD Energy Admin./Dept. Of Natural Resources	Stranded Cost/ Transition Plan	
204.	Case No. 8797 January 1998	Potomac Edison Co.	Maryland	MD Energy Admin./Dept. Of Natural Resources	Stranded Cost/ Transition Plan	
205.	Docket No. WR98090795 March 1999	Middlesex Water Co.	New Jersey	Ratepayer Advocate	Rate of Return	
206.	Docket No. 99-02-05 April 1999	Connecticut Light & Power	Connecticut	Attorney General	Stranded Costs	
207.	Docket No. 99-03-04 May 1999	United Illuminating Company	Connecticut	Attorney General	Stranded Costs	
208.	Docket No. U-20925 (FRP) June 1999	Entergy Louisiana, Inc.	Louisiana	Staff	Capital Structure	
209.	Docket No. EC-98-40-000, <u>et al</u> . May 1999	American Electric Power/ Central & Southwest	FERC	Arkansas PSC	Market Power Mitigation	
210.	Docket No. 99-03-35 July 1999	United Illuminating Company	Connecticut	Attorney General	Restructuring	
211.	Docket No. 99-03-36 July 1999	Connecticut Light & Power Co.	Connecticut	Attorney General	Restructuring	
212.	WR99040249 Oct. 1999	Environmental Disposal Corp.	New Jersey	Ratepayer Advocate	Rate of Return	
213.	2930 Nov. 1999	NEES/EUA	Rhode Island	Division Staff	Merger/Cost of Capital	
214.	DE99-099 Nov. 1999	Public Service New Hampshire	New Hampshire	Consumer Advocate	Cost of Capital Issues	
215.	00-01-11 Feb. 2000	Con Ed/NU	Connecticut	Attorney General	Merger Issues	
216.	Case No. 8821 May 2000	Reliant/ODEC	Maryland	Dept. of Natural Resources	Need for Power/Plant Operations	
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217.	Case No. 8738 July 2000	Generic	Maryland	Dept. of Natural Resources	DSM Funding
218.	Case No. U-23356 June 2000	Entergy Louisiana, Inc.	Louisiana	PSC Staff	Fuel Prudence Issues Purchased Power
219.	Case No. 21453, et al. July 2000	SWEPCO	Louisiana	PSC Staff	Stranded Costs
220.	Case No. 20925 (B) July 2000	Entergy Louisiana	Louisiana	PSC Staff	Purchase Power Contracts
221.	Case No. 24889 August 2000	Entergy Louisiana	Louisiana	PSC Staff	Purchase Power Contracts
222.	Case No. 21453, et al. February 2001	CLECO	Louisiana	PSC Staff	Stranded Costs
223.	P-00001860 and P-0000181 March 2001	GPU Companies	Pennsylvania	Office of Consumer Advocate	Rate of Return
224.	CVOL-0505662-S March 2001	ConEd/NU	Connecticut Superior Court	Attorney General	Merger (Affidavit)
225.	U-20925 (SC) March 2001	Entergy Louisiana	Louisiana	PSC Staff	Stranded Costs
226.	U-22092 (SC) March 2001	Entergy Gulf States	Louisiana	PSC Staff	Stranded Costs
227.	U-25533 May 2001	Entergy Louisiana/ Gulf States	Louisiana Interruptible Service	PSC Staff	Purchase Power
228.	P-00011872 May 2001	Pike County Pike	Pennsylvania	Office of Consumer Advocate	Rate of Return
229.	8893 July 2001	Baltimore Gas & Electric Co.	Maryland	MD Energy Administration	Corporate Restructuring
230.	8890 September 2001	Potomac Electric/Connectivity	Maryland	MD Energy Administration	Merger Issues

231.	U-25533 August 2001	Entergy Louisiana / Gulf States	Louisiana	Staff	Purchase Power Contracts
232.	U-25965 November 2001	Generic	Louisiana	Staff	RTO Issues
233.	3401 March 2002	New England Gas Co.	Rhode Island	Division of Public Utilities	Rate of Return
234.	99-833-MJR April 2002	Illinois Power Co.	U.S. District Court	U.S. Department of Justice	New Source Review
235.	U-25533 March 2002	Entergy Louisiana/ Gulf States	Louisiana	PSC Staff	Nuclear Uprates Purchase Power
236.	P-00011872 May 2002	Pike County Power & Light	Pennsylvania	Consumer Advocate	POLR Service Costs
237.	U-26361, Phase I May 2002	Entergy Louisiana/ Gulf States	Louisiana	PSC Staff	Purchase Power Cost Allocations
238.	R-00016849C001, et al. June 2002	Generic	Pennsylvania	Pennsylvania OCA	Rate of Return
239.	U-26361, Phase II July 2002	Entergy Louisiana/ Entergy Gulf States	Louisiana	PSC Staff	Purchase Power Contracts
240.	U-20925(B) August 2002	Entergy Louisiana	Louisiana	PSC Staff	Tax Issues
241.	U-26531 October 2002	SWEPCO	Louisiana	PSC Staff	Purchase Power Contract
242.	8936 October 2002	Delmarva Power & Light	Maryland	Energy Administration Dept. Natural Resources	Standard Offer Service
243.	U-25965 November 2002	SWEPCO/AEP	Louisiana	PSC Staff	RTO Cost/Benefit
244.	8908 Phase I November 2002	Generic	Maryland	Energy Administration Dept. Natural Resources	Standard Offer Service
245.	02S-315EG November 2002	Public Service Company of Colorado	Colorado	Fed. Executive Agencies	Rate of Return

246.	EL02-111-000 December 2002	PJM/MISO	FERC	MD PSC	Transmission Ratemaking
247.	02-0479 February 2003	Commonwealth Edison	Illinois	Dept. of Energy	POLR Service
248.	PL03-1-000 March 2003	Generic	FERC	NASUCA	Transmission Pricing (Affidavit)
249.	U-27136 April 2003	Entergy Louisiana	Louisiana	Staff	Purchase Power Contracts
250.	8908 Phase II July 2003	Generic	Maryland	Energy Administration Dept. of Natural Resources	Standard Offer Service
251.	U-27192 June 2003	Entergy Louisiana and Gulf States	Louisiana	LPSC Staff	Purchase Power Contract Cost Recovery
252.	C2-99-1181 October 2003	Ohio Edison Company	U.S. District Court	U.S. Department of Justice, et al.	Clean Air Act Compliance Economic Impact (Report)
253.	RP03-398-000 December 2003	Northern Natural Gas Co.	FERC	Municipal Distributors Group/Gas Task Force	Rate of Return
254.	8738 December 2003	Generic	Maryland	Energy Admin Department of Natural Resources	Environmental Disclosure (oral only)
255.	U-27136 December 2003	Entergy Louisiana, Inc.	Louisiana	PSC Staff	Purchase Power Contracts
256.	U-27192, Phase II October/December 2003	Entergy Louisiana & Entergy Gulf States	Louisiana	PSC Staff	Purchase Power Contracts
257.	WC Docket 03-173 December 2003	Generic	FCC	MCI	Cost of Capital (TELRIC)
258.	ER 030 20110 January 2004	Atlantic City Electric	New Jersey	Ratepayer Advocate	Rate of Return
259.	E-01345A-03-0437 January 2004	Arizona Public Service Company	Arizona	Federal Executive Agencies	Rate of Return
260.	03-10001 January 2004	Nevada Power Company	Nevada	U.S. Dept. of Energy	Rate of Return

261.	R-00049255 June 2004	PPL Elec. Utility	Pennsylvania	Office of Consumer Advocate	Rate of Return
262.	U-20925 July 2004	Entergy Louisiana, Inc.	Louisiana	PSC Staff	Rate of Return Capacity Resources
263.	U-27866 September 2004	Southwest Electric Power Co.	Louisiana	PSC Staff	Purchase Power Contract
264.	U-27980 September 2004	Cleco Power	Louisiana	PSC Staff	Purchase Power Contract
265.	U-27865 October 2004	Entergy Louisiana, Inc. Entergy Gulf States	Louisiana	PSC Staff	Purchase Power Contract
266.	RP04-155 December 2004	Northern Natural Gas Company	FERC	Municipal Distributors Group/Gas Task Force	Rate of Return
267.	U-27836 January 2005	Entergy Louisiana/ Gulf States	Louisiana	PSC Staff	Power plant Purchase and Cost Recovery
268.	U-199040 et al. February 2005	Entergy Gulf States/ Louisiana	Louisiana	PSC Staff	Global Settlement, Multiple rate proceedings
269.	EF03070532 March 2005	Public Service Electric & Gas	New Jersey	Ratepayers Advocate	Securitization of Deferred Costs
270.	05-0159 June 2005	Commonwealth Edison	Illinois	Department of Energy	POLR Service
271.	U-28804 June 2005	Entergy Louisiana	Louisiana	LPSC Staff	QF Contract
272.	U-28805 June 2005	Entergy Gulf States	Louisiana	LPSC Staff	QF Contract
273.	05-0045-EI June 2005	Florida Power & Lt.	Florida	Federal Executive Agencies	Rate of Return
274.	9037 July 2005	Generic	Maryland	MD. Energy Administration	POLR Service
275.	U-28155 August 2005	Entergy Louisiana Entergy Gulf States	Louisiana	LPSC Staff	Independent Coordinator of Transmission Plan

276.	U-27866-A September 2005	Southwestern Electric Power Company	Louisiana	LPSC Staff	Purchase Power Contract
277.	U-28765 October 2005	Cleco Power LLC	Louisiana	LPSC Staff	Purchase Power Contract
278.	U-27469 October 2005	Entergy Louisiana Entergy Gulf States	Louisiana	LPSC Staff	Avoided Cost Methodology
279.	A-313200F007 October 2005	Sprint (United of PA)	Pennsylvania	Office of Consumer Advocate	Corporate Restructuring
280.	EM05020106 November 2005	Public Service Electric & Gas Company	New Jersey	Ratepayer Advocate	Merger Issues
281.	U-28765 December 2005	Cleco Power LLC	Louisiana	LPSC Staff	Plant Certification, Financing, Rate Plan
282.	U-29157 February 2006	Cleco Power LLC	Louisiana	LPSC Staff	Storm Damage Financing
283.	U-29204 March 2006	Entergy Louisiana Entergy Gulf States	Louisiana	LPSC Staff	Purchase power contracts
284.	A-310325F006 March 2006	Alltel	Pennsylvania	Office of Consumer Advocate	Merger, Corporate estructuring
285.	9056 March 2006	Generic	Maryland	Maryland Energy Administration	Standard Offer Service Structure
286.	C2-99-1182 April 2006	American Electric Power Utilities	U. S. District Court Southern District, Ohio	U. S. Department of Justice	New Source Review Enforcement (expert report)
287.	EM05121058 April 2006	Atlantic City Electric	New Jersey	Ratepayer Advocate	Power plant Sale
288.	ER05121018 June 2006	Jersey Central Power & Light Company	New Jersey	Ratepayer Advocate	NUG Contracts Cost Recovery
289.	U-21496, Subdocket C June 2006	Cleco Power LLC	Louisiana	Commission Staff	Rate Stabilization Plan
290.	GR0510085 June 2006	Public Service Electric & Gas Company	New Jersey	Ratepayer Advocate	Rate of Return (gas services)
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291.	R-000061366 July 2006	Metropolitan Ed. Company Penn. Electric Company	Pennsylvania	Office of Consumer Advocate	Rate of Return
292.	9064 September 2006	Generic	Maryland	Energy Administration	Standard Offer Service
293.	U-29599 September 2006	Cleco Power LLC	Louisiana	Commission Staff	Purchase Power Contracts
294.	WR06030257 September 2006	New Jersey American Water Company	New Jersey	Rate Counsel	Rate of Return
295.	U-27866/U-29702 October 2006	Southwestern Electric Power Company	Louisiana	Commission Staff	Purchase Power/Power Plant Certification
296.	9063 October 2006	Generic	Maryland	Energy Administration Department of Natural Resources	Generation Supply Policies
297.	EM06090638 November 2006	Atlantic City Electric	New Jersey	Rate Counsel	Power Plant Sale
298.	C-2000065942 November 2006	Pike County Light & Power	Pennsylvania	Consumer Advocate	Generation Supply Service
299.	ER06060483 November 2006	Rockland Electric Company	New Jersey	Rate Counsel	Rate of Return
300.	A-110150F0035 December 2006	Duquesne Light Company	Pennsylvania	Consumer Advocate	Merger Issues
301.	U-29203, Phase II January 2007	Entergy Gulf States Entergy Louisiana	Louisiana	Commission Staff	Storm Damage Cost Allocation
302.	06-11022 February 2007	Nevada Power Company	Nevada	U.S. Dept. of Energy	Rate of Return
303.	U-29526 March 2007	Cleco Power	Louisiana	Commission Staff	Affiliate Transactions
304.	P-00072245 March 2007	Pike County Light & Power	Pennsylvania	Consumer Advocate	Provider of Last Resort Service
305.	P-00072247 March 2007	Duquesne Light Company	Pennsylvania	Consumer Advocate	Provider of Last Resort Service

306.	EM07010026 May 2007	Jersey Central Power & Light Company	New Jersey	Rate Counsel	Power Plant Sale
307.	U-30050 June 2007	Entergy Louisiana Entergy Gulf States	Louisiana	Commission Staff	Purchase Power Contract
308.	U-29956 June 2007	Entergy Louisiana	Louisiana	Commission Staff	Black Start Unit
309.	U-29702 June 2007	Southwestern Electric Power Company	Louisiana	Commission Staff	Power Plant Certification
310.	U-29955 July 2007	Entergy Louisiana Entergy Gulf States	Louisiana	Commission Staff	Purchase Power Contracts
311.	2007-67 July 2007	FairPoint Communications	Maine	Office of Public Advocate	Merger Financial Issues
312.	P-00072259 July 2007	Metropolitan Edison Co.	Pennsylvania	Office of Consumer Advocate	Purchase Power Contract Restructuring
313.	EO07040278 September 2007	Public Service Electric & Gas	New Jersey	Rate Counsel	Solar Energy Program Financial Issues
314.	U-30192 September 2007	Entergy Louisiana	Louisiana	Commission Staff	Power Plant Certification Ratemaking, Financing
315.	9117 (Phase II) October 2007	Generic (Electric)	Maryland	Energy Administration	Standard Offer Service Reliability
316.	U-30050 November 2007	Entergy Gulf States	Louisiana	Commission Staff	Power Plant Acquisition
317.	IPC-E-07-8 December 2007	Idaho Power Co.	Idaho	U.S. Department of Energy	Cost of Capital
318.	U-30422 (Phase I) January 2008	Entergy Gulf States	Louisiana	Commission Staff	Purchase Power Contract
319.	U-29702 (Phase II) February, 2008	Southwestern Electric Power Co.	Louisiana	Commission Staff	Power Plant Certification
320.	March 2008	Delmarva Power & Light	Delaware State Senate	Senate Committee	Wind Energy Economics
321.	U-30192 (Phase II) March 2008	Entergy Louisiana	Louisiana	Commission Staff	Cash CWIP Policy, Credit Ratings
					22

322.	U-30422 (Phase II) April 2008	Entergy Gulf States - LA	Louisiana	Commission Staff	Power Plant Acquisition
323.	U-29955 (Phase II) April 2008	Entergy Gulf States - LA Entergy Louisiana	Louisiana	Commission Staff	Purchase Power Contract
324.	GR-070110889 April 2008	New Jersey Natural Gas Company	New Jersey	Rate Counsel	Cost of Capital
325.	WR-08010020 July 2008	New Jersey American Water Company	New Jersey	Rate Counsel	Cost of Capital
326.	U-28804-A August 2008	Entergy Louisiana	Louisiana	Commission Staff	Cogeneration Contract
327.	IP-99-1693C-M/S August 2008	Duke Energy Indiana	Federal District Court	U.S. Department of Justice/ Environmental Protection Agency	Clean Air Act Compliance (Expert Report)
328.	U-30670 September 2008	Entergy Louisiana	Louisiana	Commission Staff	Nuclear Plant Equipment Replacement
329.	9149 October 2008	Generic	Maryland	Department of Natural Resources	Capacity Adequacy/Reliability
330.	IPC-E-08-10 October 2008	Idaho Power Company	Idaho	U.S. Department of Energy	Cost of Capital
331.	U-30727 October 2008	Cleco Power LLC	Louisiana	Commission Staff	Purchased Power Contract
332.	U-30689-A December 2008	Cleco Power LLC	Louisiana	Commission Staff	Transmission Upgrade Project
333.	IP-99-1693C-M/S February 2009	Duke Energy Indiana	Federal District Court	U.S. Department of Justice/EPA	Clean Air Act Compliance (Oral Testimony)
334.	U-30192, Phase II February 2009	Entergy Louisiana, LLC	Louisiana	Commission Staff	CWIP Rate Request Plant Allocation
335.	U-28805-B	Entergy Gulf States, LLC	Louisiana	Commission Staff	Cogeneration Contract
336.	February 2009 P-2009-2093055, et al. May 2009	Metropolitan Edison Pennsylvania Electric	Pennsylvania	Office of Consumer Advocate	Default Service
337.	U-30958 July 2009	Cleco Power	Louisiana	Commission Staff	Purchase Power Contract
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338.	EO08050326 August 2009	Jersey Central Power Light Co.	New Jersey	Rate Counsel	Demand Response Cost Recovery
339.	GR09030195 August 2009	Elizabethtown Gas	New Jersey	New Jersey Rate Counsel	Cost of Capital
340.	U-30422-A August 2009	Entergy Gulf States	Louisiana	Staff	Generating Unit Purchase
341.	CV 1:99-01693 August 2009	Duke Energy Indiana	Federal District Court – Indiana	U. S. DOJ/EPA, et al.	Environmental Compliance Rate Impacts (Expert Report)
342.	4065 September 2009	Narragansett Electric	Rhode Island	Division Staff	Cost of Capital
343.	U-30689 September 2009	Cleco Power	Louisiana	Staff	Cost of Capital, Rate Design, Other Rate Case Issues
344.	U-31147 October 2009	Entergy Gulf States Entergy Louisiana	Louisiana	Staff	Purchase Power Contracts
345.	U-30913 November 2009	Cleco Power	Louisiana	Staff	Certification of Generating Unit
346.	M-2009-2123951 November 2009	West Penn Power	Pennsylvania	Office of Consumer Advocate	Smart Meter Cost of Capital (Surrebuttal Only)
347.	GR09050422 November 2009	Public Service Electric & Gas Company	New Jersey	Rate Counsel	Cost of Capital
348.	D-09-49 November 2009	Narragansett Electric	Rhode Island	Division Staff	Securities Issuances
349.	U-29702, Phase II November 2009	Southwestern Electric Power Company	Louisiana	Commission Staff	Cash CWIP Recovery
350.	U-30981 December 2009	Entergy Louisiana Entergy Gulf States	Louisiana	Commission Staff	Storm Damage Cost Allocation
351.	U-31196 (ITA Phase) February 2010	Entergy Louisiana	Louisiana	Staff	Purchase Power Contract
352.	ER09080668 March 2010	Rockland Electric	New Jersey	Rate Counsel	Rate of Return
353.	GR10010035 May 2010	South Jersey Gas Co.	New Jersey	Rate Counsel	Rate of Return
					24

354.	P-2010-2157862 May 2010	Pennsylvania Power Co.	Pennsylvania	Consumer Advocate	Default Service Program
355.	10-CV-2275 June 2010	Xcel Energy	U.S. District Court Minnesota	U.S. Dept. Justice/EPA	Clean Air Act Enforcement
356.	WR09120987 June 2010	United Water New Jersey	New Jersey	Rate Counsel	Rate of Return
357.	U-30192, Phase III June 2010	Entergy Louisiana	Louisiana	Staff	Power Plant Cancellation Costs
358.	31299 July 2010	Cleco Power	Louisiana	Staff	Securities Issuances
359.	App. No. 1601162 July 2010	EPCOR Water	Alberta, Canada	Regional Customer Group	Cost of Capital
360.	U-31196 July 2010	Entergy Louisiana	Louisiana	Staff	Purchase Power Contract
361.	2:10-CV-13101 August 2010	Detroit Edison	U.S. District Court Eastern Michigan	U.S. Dept. of Justice/EPA	Clean Air Act Enforcement
362.	U-31196 August 2010	Entergy Louisiana Entergy Gulf States	Louisiana	Staff	Generating Unit Purchase and Cost Recovery
363.	Case No. 9233 October 2010	Potomac Edison Company	Maryland	Energy Administration	Merger Issues
364.	2010-2194652 November 2010	Pike County Light & Power	Pennsylvania	Consumer Advocate	Default Service Plan
365.	2010-2213369 April 2011	Duquesne Light Company	Pennsylvania	Consumer Advocate	Merger Issues
366.	U-31841 May 2011	Entergy Gulf States	Louisiana	Staff	Purchase Power Agreement
367.	11-06006 September 2011	Nevada Power	Nevada	U. S. Department of Energy	Cost of Capital
368.	9271 September 2011	Exelon/Constellation	Maryland	MD Energy Administration	Merger Savings
369.	4255 September 2011	United Water Rhode Island	Rhode Island	Division of Public Utilities	Rate of Return
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370.	P-2011-2252042 October 2011	Pike County Light & Power	Pennsylvania	Consumer Advocate	Default service plan
371.	U-32095 November 2011	Southwestern Electric Power Company	Louisiana	Commission Staff	Wind energy contract
372.	U-32031 November 2011	Entergy Gulf States Louisiana	Louisiana	Commission Staff	Purchased Power Contract
373.	U-32088 January 2012	Entergy Louisiana	Louisiana	Commission Staff	Coal plant evaluation
374.	R-2011-2267958 February 2012	Aqua Pa.	Pennsylvania	Office of Consumer Advocate	Cost of capital
375.	P-2011-2273650 February 2012	FirstEnergy Companies	Pennsylvania	Office of Consumer Advocate	Default service plan
376.	U-32223 March 2012	Cleco Power	Louisiana	Commission Staff	Purchase Power Contract and Rate Recovery
377.	U-32148 March 2012	Entergy Louisiana Energy Gulf States	Louisiana	Commission Staff	RTO Membership
378.	ER11080469 April 2012	Atlantic City Electric	New Jersey	Rate Counsel	Cost of capital
379.	R-2012-2285985 May 2012	Peoples Natural Gas Company	Pennsylvania	Office of Consumer Advocate	Cost of capital
380.	U-32153	Cleco Power	Louisiana	Commission Staff	Environmental Compliance
381.	U-32435 August 2012	Entergy Gulf States Louisiana LLC	Louisiana	Commission Staff	Cost of equity (gas)
382.	ER-2012-0174 August 2012	Kansas City Power & Light Company	Missouri	U. S. Department of Energy	Rate of return
383.	U-31196 August 2012	Entergy Louisiana/ Entergy Gulf States	Louisiana	Commission Staff	Power Plant Joint Ownership
384.	ER-2012-0175 August 2012	KCP&L Greater Missouri Operations	Missouri	U.S. Department of Energy	Rate of Return
385.	4323 August 2012	Narragansett Electric Company	Rhode Island	Division of Public Utilities and Carriers	Rate of Return (electric and gas)
					26

386.	D-12-049 October 2012	Narragansett Electric Company	Rhode Island	Division of Public Utilities and Carriers	Debt issue	
387.	GO12070640 October 2012	New Jersey Natural Gas Company	New Jersey	Rate Counsel	Cost of capital	
388.	GO12050363 November 2012	South Jersey Gas Company	New Jersey	Rate Counsel	Cost of capital	
389.	R-2012-2321748 January 2013	Columbia Gas of Pennsylvania	Pennsylvania	Office of Consumer Advocate	Cost of capital	
390.	U-32220 February 2013	Southwestern Electric Power Co.	Louisiana	Commission Staff	Formula Rate Plan	
391.	CV No. 12-1286 February 2013	PPL et al.	Federal District Court	MD Public Service Commission	PJM Market Impacts (deposition)	
392.	EL13-48-000 February 2013	BGE, PHI subsidiaries	FERC	Joint Customer Group	Transmission Cost of Equity	
393.	EO12080721 March 2013	Public Service Electric & Gas	New Jersey	Rate Counsel	Solar Tracker ROE	
394.	EO12080726 March 2013	Public Service Electric & Gas	New Jersey	Rate Counsel	Solar Tracker ROE	
395.	CV12-1286MJG March 2013	PPL, PSEG	U.S. District Court for the District of Md.	Md. Public Service Commission	Capacity Market Issues (trial testimony)	
396.	U-32628 April 2013	Entergy Louisiana and Gulf States Louisiana	Louisiana	Staff	Avoided cost methodology	
397.	U-32675 June 2013	Entergy Louisiana and Entergy Gulf States	Louisiana	Staff	RTO Integration Issues	
398.	ER12111052 June 2013	Jersey Central Power & Light Company	New Jersey	Rate Counsel	Cost of capital	
399.	PUE-2013-00020 July 2013	Dominion Virginia Power	Virginia	Apartment & Office Building Assoc. of Met. Washington	Cost of capital	
400.	U-32766 August 2013	Cleco Power	Louisiana	Staff	Power plant acquisition	
401.	U-32764 September 2013	Entergy Louisiana and Entergy Gulf States	Louisiana	Staff	Storm Damage Cost Allocation	
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402.	P-2013-237-1666 September 2013	Pike County Light and Power Co.	Pennsylvania	Office of Consumer Advocate	Default Generation Service
403.	E013020155 and G013020156 October 2013	Public Service Electric and Gas Company	New Jersey	Rate Counsel	Cost of capital
404.	U-32507 November 2013	Cleco Power	Louisiana	Staff	Environmental Compliance Plan
405.	DE11-250 December 2013	Public Service Co. New Hampshire	New Hampshire	Consumer Advocate	Power plant investment prudence
406.	4434 February 2014	United Water Rhode Island	Rhode Island	Staff	Cost of Capital
407.	U-32987 February 2014	Atmos Energy	Louisiana	Staff	Cost of Capital
408.	EL 14-28-000 February 2014	Entergy Louisiana Entergy Gulf States	FERC	LPSC	Avoided Cost Methodology (affidavit)
409.	ER13111135 May 2014	Rockland Electric	New Jersey	Rate Counsel	Cost of Capital
410.	13-2385-SSO, et al. May 2014	AEP Ohio	Ohio	Office of Consumers' Counsel	Default Service Issues
411.	U-32779 May 2014	Cleco Power, LLC	Louisiana	Staff	Formula Rate Plan
412.	CV-00234-SDD-SCR June 2014	Entergy Louisiana Entergy Gulf	U.S. District Court Middle District Louisiana	Louisiana Public Service Commission	Avoided Cost Determination Court Appeal
413.	U-32812 July 2014	Entergy Louisiana	Louisiana	Staff	Nuclear Power Plant Prudence
414.	14-841-EL-SSO September 2014	Duke Energy Ohio	Ohio	Ohio Consumers' Counsel	Default Service Issues
415.	EM14060581 November 2014	Atlantic City Electric	New Jersey	Rate Counsel	Merger Financial Issues
416.	EL-13-48-001 December 2014	Baltimore Gas & Electric I PHI Utilities	FERC	Joint Complainants	Cost of Equity
					28

I	14-1297-EL-SSO December 2014	FirstEnergy Ohio Utilities	Ohio	Consumers' Counsel	Default Service Issues

APPENDIX C

PAST TESTIMONY ON DEFAULT GENERATION SERVICE OF

MATTHEW I. KAHAL

	Expert Testimony of Matthew I. Kahal					
	Docket Number	Utility	Jurisdiction	Client		
236.	P-00011872 May 2002	Pike County Power & Light	Pennsylvania	Consumer Advocate		
242.	8936 October 2002	Delmarva Power & Light	Maryland	Energy Administration Dept. Natural Resources		
244.	8908 Phase I November 2002	Generic	Maryland	Energy Administration Dept. Natural Resources		
247.	02-0479 February 2003	Commonwealth Edison	Illinois	Dept. of Energy		
250.	8908 Phase II July 2003	Generic	Maryland	Energy Administration Dept. of Natural Resources		
270.	05-0159 June 2005	Commonwealth Edison	Illinois	Department of Energy		
274.	9037 July 2005	Generic	Maryland	MD. Energy Administration		
285.	9056 March 2006	Generic	Maryland	Maryland Energy Administration		
292.	9064 September 2006	Generic	Maryland	Energy Administration		
304.	P-00072245 March 2007	Pike County Light & Power	Pennsylvania	Consumer Advocate		
305.	P-00072247 March 2007	Duquesne Light Company	Pennsylvania	Consumer Advocate		
315.	9117 (Phase II) October 2007	Generic (Electric)	Maryland	Energy Administration		
336.	P-2009-2093055, et al. May 2009	Metropolitan Edison Pennsylvania Electric	Pennsylvania	Office of Consumer Advocate		
354.	P-2010-2157862 May 2010	Pennsylvania Power Co.	Pennsylvania	Consumer Advocate		
				1		

	Expert Testimony of Matthew I. Kahal					
364.	<u>Docket Number</u> 2010-2194652 November 2010	<u>Utility</u> Pike County Light & Power	<u>Jurisdiction</u> Pennsylvania	<u>Client</u> Consumer Advocate		
370.	P-2011-2252042 October 2011	Pike County Light & Power	Pennsylvania	Consumer Advocate		
375.	P-2011-2273650 February 2012	FirstEnergy Companies	Pennsylvania	Office of Consumer Advocate		
402.	P-2013-237-1666 September 2013	Pike County Light and Power Co.	Pennsylvania	Office of Consumer Advocate		
410.	13-2385-EL-SSO May 2014	AEP Ohio	Ohio	Consumers' Counsel		
414.	14-841-EL-SSO September 2014	Duke Energy Ohio	Ohio	Consumers' Counsel		
417.	14-1297-EL-SSO December 2014	FirstEnergy Ohio Utilities.	Ohio	Consumers' Counsel		

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Case No(s). 14-1297-EL-SSO

Summary: Testimony Direct Testimony of Matthew I. Kahal on Behalf of the Office of the Ohio Consumers' Counsel and the Northeast Ohio Public Energy Council electronically filed by Ms. Deb J. Bingham on behalf of Sauer, Larry S.